

Areas of Learning Basic to Lifelong Education

P. Lengrand

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AREAS OF LEARNING BASIC TO LIFELONG EDUCATION

by

P. LENGRAND



UNESCO INSTITUTE FOR EDUCATION HAMBURG, FRG
and
PERGAMON PRESS

OXFORD · NEW YORK · BEIJING · FRANKFURT
SÃO PAULO · SYDNEY · TOKYO · TORONTO

| | |
|--------------------------------|---|
| U.K. | Pergamon Press, Headington Hill Hall, Oxford OX3 0BW, England |
| U.S.A. | Pergamon Press, Maxwell House, Fairview Park, Elmsford, New York 10523, U.S.A. |
| PEOPLE'S REPUBLIC OF CHINA | Pergamon Press, Qianmen Hotel, Beijing, People's Republic of China |
| FEDERAL REPUBLIC OF GERMANY | Pergamon Press, Hammerweg 6, D-6242 Kronberg, Federal Republic of Germany |
| BRAZIL | Pergamon Editora, Rua Eça de Queiros, 346, CEP 04011, São Paulo, Brazil |
| AUSTRALIA | Pergamon Press Australia, P.O. Box 544, Potts Point, N.S.W. 2011, Australia |
| JAPAN | Pergamon Press, 8th Floor, Matsuoka Central Building, 1-7-1 Nishishinjuku, Shinjuku-ku, Tokyo 160, Japan |
| CANADA | Pergamon Press Canada, Suite 104, 150 Consumers Road, Willowdale, Ontario M2J 1P9, Canada |

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First edition 1986

Library of Congress Cataloging in Publication Data

Lengrand, Paul.

Areas of learning basic to lifelong education.
(Advances in lifelong education; v. 10)

Includes bibliographies and index.

1. Continuing education—Moral and ethical
aspects. 2. Learning. I. Title. II. Series.
LC5215.L44 1987 374 86-22663

British Library Cataloguing in Publication Data

Areas of learning basic to lifelong education.

—(Advances in lifelong education, v. 10)

1. Continuing education

I. Lengrand, P. II. Unesco. Institute for
Education III. Series

374 LC5215

ISBN 0-08-026782-3 (Hardcover)

ISBN 0-08-026783-1 (Flexicover)

374
LEN
374
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Foreword

The study of lifelong education, conceived of as a global view of the educational phenomenon, is bringing fresh insights into the many aspects of the educational process. It is seen that this process covers areas of learning which go beyond the purely intellectual sphere into all dimensions of being and encompass all dimensions of learning. For the individual seeking to develop attitudes and capacities which will enable him both to cope successfully with the challenges confronting him throughout his life and to participate constructively in the larger processes of development, these dimensions assume great importance.

This book, the result of a collective project undertaken by the Unesco Institute of Education (UIE), presents nine papers prepared as a result of individual studies and collective work by experts from various countries who are known internationally for their outstanding contributions to the problems of learning as a basis for lifelong education.

The areas which have been selected for treatment because of their importance in the educational process are: communication, corporal man, time, space, art, man as citizen, the ethical domain, technology, and the scientific spirit.

In his synthesis of the papers the Project Co-ordinator indicates the fundamental relations which exist between the areas under discussion. A study of the papers further reveals how closely two areas in particular are interlinked - those of morality and technology. At the centre of this interrelationship is a vitally important question: In the contemporary world, where the development of new technologies is proceeding at an ever-increasing speed, how is the individual to decide which of these new technologies are likely to be beneficial to mankind, and which are likely to be destructive? In order to be able to answer this question and therefore to make a choice between the different possibilities for progress made available by the proliferation of technologies which exists and which will be developed in the future, the individual must inevitably look to the moral values assimilated during his life before making the

decisions which he believes will bring the greatest benefit to all human beings.

The approach adopted in this book is new in two respects: firstly, each of the themes is treated in terms of learning; secondly, each of them is related to the others in a global and transdisciplinary view of personal development.

We are extremely grateful to Mr Paul Lengrand for co-ordinating this project on behalf of UIE, and to the individual authors whose papers are contained in this volume: Doctor José María Cagigal, Professor José Mariano Gago, Professor Brian Groombridge, Mr Haruo Kitagawa, Mr Alberto Melo, Mr Paulo Novaes, Mr Gaston Pineau, Mr Guy Saez, and Professor Irena Wojnar.

From UIE our thanks are due to Mr Jeremy Greenland who worked on the initial phase of the project, to Mr Paul Fisk and Mr Frederick Gardiner who edited the material, to Ms Johanna Kesavan who translated the original manuscripts written in French into English, and to Mr Michael Green, Ms Inés Pennacca and Ms Claudia Böttger who assisted in the production of the final version of the manuscript.

Ravindra H. Dave

Director
Unesco Institute for Education

Chapter 1

Introduction

P. Lengrand

1. School and Society

The strength and stability of the educational systems established in the last century derived on the one hand from a fundamental accord between their objectives and functions, and on the other from the state of society, the aspirations and expectations of the various groups concerned and the ideologies dominant at that time. The structures of these systems reproduced and reinforced the pattern of a hierarchical society which, having inherited feudal distinctions and cleavages, was characterized by glaring inequalities.

One of the chief developments in the present epoch, so fertile in upheavals, is the disintegration of the school as a majestic and coherent institution. At the same time that cracks are appearing in the edifice, there are increasing signs of inner exhaustion. Yet outwardly, little has changed in the structure and functioning of schools. Terms start regularly every year. All over the world the school model is expanding, and the first structure newly independent countries set up, after an army and a police force, is the primary school, rapidly followed by the secondary school and the university. In every country the teaching personnel constitute a compact body of specialised workers, more numerous than in any other profession. In this respect, the situation cannot be called critical, except perhaps in particular disciplines where graduates have difficulty in finding employment. They then swell the ranks of the intellectual unemployed, a particularly vulnerable sector owing to the narrow specialisation of this category of workers.

It is thus not at the level of recruitment, either of students or of teachers, that instability becomes apparent, but at the level of expectations, justifications and objectives - in

the role and functions of educational institutions and their personnel, as well as in the content and methods of instruction employed in educating the population.

At the base of the pyramid of educational institutions, formerly, was the primary school, the function of which was to supply society in the process of industrialisation with workers who were equipped with the minimum of education and intellectual qualifications necessary for their tasks in production. The ruling classes, who performed more highly qualified functions and constituted the upper grades of administrative, industrial and commercial personnel, had two further levels of education at their disposal - secondary education, and the top stratum of the edifice, higher education.

To secure and justify this structure, in itself hardly in accordance with the democratic principles to which societies that had left feudalism behind claimed to adhere, the ideology of merit was invoked: everybody had the same opportunities, but it was in the nature of things that the more able should be provided with more facilities, while those less fortunate in the distribution of capacities or cultural stimulation joined the masses who had to be content with the rudimentary cultural activities available. The idea of merit had the effect of making those on the right side of the fence fully aware of their success; the rest learned resignation. Unjust, and contrary to the authentic principles of equality of educational opportunity as this system was, it had a solid foundation in the accepted values and conventions of the different levels of society.

The so-called lower classes saw in the school the means of satisfying their natural desire for education. Parents thought that a better level of schooling could, in favourable circumstances, become a determining factor for the personal promotion and social advancement of their children. The link between schooling and their rung on the social ladder was still more evident, more decisive, in the case of the various strata of the middle and upper ruling classes.

Although there were occasions when small, or even large, sections of the population refused to accept this justification of the system, the majority never questioned the education dispensed by the national institutions. For those in power, the school has always been the main instrument of control over the country. The structure of traditional education and the way it functions provide the model for the relationship between the

governing and the governed. This is only natural, since children and adolescents are dependent on the adults who direct their education, i.e., on the coalition between parents and various kinds of educators.

In these conditions it is not surprising that authoritarian regimes, of whatever ideology, tend to preserve traditional school structures. For them, educational reform can have only one objective: to perfect the machine which produces conforming citizens, by increasing its yield and effectiveness. The function of selection carried out by such systems also responds to one of the main concerns of governments, namely, to provide the country with specialist personnel capable of directing and stimulating the various branches and sectors of industry, administration and commerce in which they are involved.

In addition to the conditioning which the nature and functioning of educational institutions has effected, the system has played a decisive role in propagating various components of the ideology that has inspired the ruling classes for the last 150 years. One element of this ideology has been 'growth'. Even when the word had not yet become fashionable, the objective existed. Around 1830, a French minister told the growing middle class that they should 'get rich'. Throughout the whole process of development of modern states, built on the spirit of enterprise and conquest and on competence in mobilising the masses, hard work, thrift and other economic principles have been proposed as fundamental values. The accumulation of material capital has run parallel to the creation of moral capital and, unintentionally - even unconsciously - the agents of education have been allies of the factory builders and financial consortiums.

The second aspect of this dominant ideology was nationalism. It is not intended here to judge nationalism, to expound its strengths and weaknesses, its ambivalence, or its links with the noblest as well as with the basest elements of human nature. Attention is simply drawn to the fact of fundamental differences in the motives that have underlain the great events of the modern world. For centuries, dynastic interests and the ambition of leaders determined the structuring of societies and the foundation and evolution of states; the ideas and sentiments attached to 'the nation' became all-powerful - they took on the breadth and force of a religion. The values generated by the emergence of 'the nation' tended to submerge the universal values that had for so long sustained the various continental entities. Collective loves and hates, resentments, enthusiasms, even hysteria, assumed an intensity rarely known in earlier epochs.

In the various countries concerned, the middle class adopted this new religion, this mixture of mysticism and politics. It served to cement the constitutions of modern states. Under the cover of national unity, it obscured the profound cleavages caused by the division of populations into classes, separated from each other by their economic conditions and levels of education, and helped them to be forgotten. State strategies for exerting influence on people's minds had to be developed. The ruling powers found a host of allies and agents in the contemporary public media, especially newspapers and popular literature. But the principal role in this mobilisation of hearts and spirits was played by education. The thirst for power of modern states was supported by the patriotic zeal of teachers, whose task was made all the easier because aggressive patriotism fully corresponded to the mind of the people: they were convinced of the superiority of their own way of living, thinking and feeling. Education and its agents at various levels made themselves the major instruments of this strategy. Without this influence on generations of citizens, it would be difficult to understand how millions of adults could willingly have taken part in the World Wars.

The success of the educational system, however, had its roots not only in the social fabric, in its close links with material interests or in popular nationalism. It was also sustained by the readiness with which it was accepted by many sections of the intelligentsia. A great number of thinkers and theoreticians saw it as an element of progress. Compared with the theocratic ideologies which had dominated the world for centuries, the transmission to the population of curriculum content by means of free and compulsory education, appeared to be a triumph of light over darkness.

The establishment of this structure in modern nations did not come to pass without strong resistance on the part of those elements in society that looked to the past and wanted to maintain traditional practices. For generations the struggle between teachers and the clergy symbolised, in countries like France, the fight for freedom of thought and a democratic way of public life.

Moreover, it is a law of historical evolution that a structure, established to serve definite objectives, finishes by playing a role which corresponds only partly to the goals of its founders; sometimes it even becomes inimical to them. In the course of its expansion, the middle-class school has produced

not only conforming and conformist citizens but also generations of dissidents - people immune to the official ideology - who, supported by class consciousness, were strong and resolute enough to use the intellectual instruments with which public education had furnished them for revolutionary action. At the same time that the school turned out the human resources for factories and offices, it also provided the necessary education for participants in political and trade union struggles, who tried to set up a more just and less hierarchical society, less wasteful of energy and human talent.

Today, doubt and scepticism are penetrating where certainty and confidence used to reign. The teacher's task is increasingly viewed just as an occupation or as simply a means of earning a living. Ever fewer see teaching as a mission, a vocation. The majority of these professionals come from the borderland between the working class and the lower middle class, sectors of the population that are less and less imbued with the ideology of the ruling classes. Many reject it outright. Altogether, they no longer believe in the values and the justification of the goals which the official world continues to proclaim. Reality conflicts too much with the talk about humanism. Furthermore, many teachers resent the weakening of their social status, their diminishing prestige and often precarious financial situation; and a sense of service and participation in collective causes cannot provide an adequate compensation. Whereas for generations the teacher occupied a central place in the social structure, he is now shifting ever nearer to the periphery, and this fact largely accounts for reserved, sometimes even apathetic, attitudes.

The uncomfortable position of some teaching personnel is aggravated by changes inside the educational system that affect relations between teachers and students. This relationship rests less and less on authority, which is being challenged in various degrees - from radical questioning to effrontery and sarcasm. The respect traditionally accorded to the teacher is no longer automatically given because of his status but depends on his actions and the type of relationship he has with his pupils. Furthermore, the communication of professional knowledge is encountering increasing difficulties, the gravest of which is the lack of interest shown by numerous pupils in whole sections of the teaching programme.

This relativity of authority, this weakening of the traditional ways in which authority was expressed, is a general phenomenon of modern civilisation. It is manifested in the family circle as well as in the factory, where the traditional authority

of the employer is constantly declining. The notion and function of the one in whom responsibility is vested, be it in the family, in business or in the state, is no longer accepted without question. The person who represents authority has increasingly to give proof of competence and ability to secure the necessary minimum of approval and credibility.

A questioning attitude is also making inroads into the domain of ideas. The notion of power has become a central theme in thinking about the situation of modern man and his relations with institutions. Traditionally, the teacher had very wide powers. As an instrument of administrative power, thanks to the superiority credited to the institutionalised knowledge of which he possessed all the keys, he was able to mould pupils' minds, to judge, decide and punish. The fate of the young who were entrusted to him depended in large measure on his selections, his preferences, his disapproval and exclusions, often without redress. For centuries the child or youth, unless he were among the teacher's favourites, had no alternative in the face of such a formidable array of power than to submit and resign himself.

But the world became impatient. One theorist of development stated that what distinguished our epoch from the preceding ones was 'the end of resignation'. Colonised peoples have ceased being resigned to dependence on foreign administration, women to dependence on men, the poor to their poverty, the oppressed to being the pariahs of the world. Even if they remain dependent in fact, they are no longer resigned in spirit.

A similar sentiment now pervades the mechanisms of educational systems, though it is less explicit, less articulated and not at all organised. Children have no means of expressing their rejection of the order imposed on them other than illness, unhappiness or resort to what is described as laziness and mischief. In the long-term, this opposition, which has increased dramatically in recent years, will be a principal factor in transforming traditional ways of education.

Parallel to this development within educational systems there have been assaults from various external disciplines. Economists have criticised the poor return from the school. In no other human enterprise, they maintain, is failure accepted as an inevitable element of its functioning. It is unthinkable in any civilisation that the plans of an architect could envisage the collapse of three or four of every ten constructions. Such disproportion between investment and output would lead to the discharge of the person responsible, but it is tolerated in the

'production' of the pupil. Scandalous as such failure is in a society that stands solidly on its educational achievements, it becomes unacceptable in a large number of developing societies where the rate of school drop-out is very high. The wastage of time, energy and money is tolerated only because it sustains routine, mental laziness and lack of imagination.

According to psychologists and specialists in character studies, another weakness of the system lies in its abstraction. The goal is not to produce a concrete individual in the fulness of his being and the diversity of his manifestations, but an abstract being deprived of physical, social and mental characteristics. The only element that is deemed important is an ability to assimilate the contents of a pre-arranged programme. This emphasis on the aspect of knowledge (so called) leaves aside other essential and fundamental dimensions of personality, particularly those involving the body, the emotions and the aesthetic faculties. In these conditions, the only pupils who can strengthen and develop their personality are those who by temperament are adapted to the system and reproduce their teachers' attitudes, way of thinking and understanding of reality. The others, that is the majority, become marginal to the class-unit and in the end to society, and their normal development is inhibited. Existential waste is added to economic waste. Far from depending on the individual's personal development, success or failure is the fruit of chance, the arbitrary distribution of abilities. In this respect, education is failing to fulfil its mission, its *raison d'être*, which is not to transmit ready-made knowledge but to enable each person to develop his potential and to lay hold of all the dimensions of his being.

2. Towards a New Educational Order

2.1 Continuing education

This is not the place to dwell upon a system perfectly suited to the needs of a hierarchical, authoritarian and selective society. It entirely fulfilled the functions assigned to it at a certain period in the evolution of modern nations, but it is no longer appropriate for the specific requirements of our own time. What is important is to underline the obsolescence of current practices, and the consequent need to find new solutions to the problem of educating the various sectors of the population.

The search for a new educational order is taking several directions. First, the educational process must be placed in the right perspective. Hitherto, the emphasis had been on the function of preparation. Life seemed to be divided into two parts: during the first, childhood and adolescence, the individual was supposed to acquire the essentials of knowledge and know-how indispensable for the second part of his life, in which he would develop the various facets of his adult personality. Successive diplomas marked the stages of the preparation phase and these stages grew more complex as the functions to be fulfilled became more complicated or more specialised. Accumulation of intellectual capital, tested and confirmed, appeared to be the fundamental educational objective for the first period of life.

While not excluding the first function, reflection and experience show that this conceptualisation represents a limited and falsified view of the educational phenomenon. Considering that everybody in the course of his continuing development - and especially in times of crisis and change - has to make a conscious and organised effort to face a succession of challenges to his existence, it is clear that educational activity cannot be confined to a particular period. 'Formation' would be the appropriate word, for what is required is giving a form to thoughts, desires, sentiments and relationships, an active effort involving all the individual's resources in the intellectual, affective and moral domains.

The continuous nature of education has always been known and experienced by individuals who, inspired by curiosity or the urge to create, do not cease to go ahead and to progress throughout their existence. But the larger majority never perceive it, hidden as it is by the stifling presence of institutional structures and inhibited by the type of education which these dispense.

2.2 Adult education

Apart from remarkable individual cases, the first breach in the bastion of the existing system was made by the introduction and development of structures for adult education. Whatever the social, political and cultural contexts, whatever the motivations and concerns arising from economic pressure or specifically cultural needs, the result from an educational point of view is that an increasing number of people systematically pursue their education beyond the limits of school or university. There

is no intention here to examine the merits, advantages or disadvantages of any particular form of provision; it is merely proposed to emphasise the contribution this new type of education makes to the theory and practice of education in general.

For the first time, an element of freedom has been introduced into the educational universe. It is well known that compulsion, while no doubt inevitable from the social and political points of view, is a formidable factor of sterility, particularly when a uniform model is imposed on an entire nation. The element of freedom consists in choice and diversity. The driving force of the ongoing process is the wishes of the people concerned. Even if not everybody is fully aware of what does or does not suit him, the essential point is that he is in a position to demand, to accept or to refuse. The law governing the market, the equilibrium of demand and supply, plays a positive role in this case.

Thus a new person has come on the scene - the adult student, unique in his personality and his determinants, and rich in experience. Indeed, out of his experiences as producer, citizen and member of a family, he has built up his own notion and sociology, his own theory of economics. Any form of adult education that did not take these assets into account would be doomed to failure. It is, therefore, not surprising that adult education has been a field of experimentation of the highest interest.

As this educational domain expanded and structures responding to the needs of different groups were established, a considerable number of innovations were tried out. These were not produced immediately. During a preliminary period, the programmes, methods, and the status and behaviour of teachers, were based on those of the school, college or university. To some extent this is still the case, particularly in literacy programmes where the adult finds himself in the situation of a primary school pupil. But progressively, adult education has broken away from traditional models. Ex-cathedra lectures, set tasks and conventional lessons have gradually been replaced by group work, group discussion and the exchange of experiences. More extensive use is made of the media as vehicles of information and instruments of demonstration. Perhaps most significantly, the teacher has been succeeded by the *animateur* whose function is not to transmit knowledge but to render the adults in his charge capable of seeking, questioning and utilising personal experience and documentation. As far as possible, links are established between, on the one hand, the more or less immediate needs for action by the participants in the educational activity (together with the

contribution these actions make to knowledge, to awareness and to personality development) and, on the other hand, the contribution of study. Motivation plays an essential role in this regard.

In addition to the services rendered to the particularly motivated part of the adult population, the practice of adult education has had a powerful impact on theory. On the basis of experience acquired in this sector, fundamental educational concepts have been re-examined, such as the nature of the educational process, the place it occupies in society alongside other areas of public life, the general goals of education and the specific objectives assigned to it at a given stage in the evolution of this society, and the role played by educational activities in the overall development of the personality compared with that of biological, economic, social and vocational factors.

3. Lifelong Education

From this practice of education and theoretical reflection on it, a global view of the educational phenomenon has gradually developed; this has been labelled 'lifelong education'. There is no single centre of thought from which this idea has been disseminated, nor is there a code of propositions that would enable the faithful to be distinguished from the heretics. Every social, national, vocational context makes its own contribution. But for the purpose of this study, attention will be focused on the implications of the concept, which are emerging ever more clearly. Let us recall some of the results obtained by different theoretical approaches to the educational phenomenon as employed by educationists and also by doctors, psychologists, artists and philosophers.

3.1 Continuity

First, the element of continuity. This has already been mentioned, but it cannot be stressed enough. The educational process is continuous, from the earliest years of life to the final phase. It is the same (though always different) individual, who increasingly becomes in fact what he is potentially. Consequently, the educational future of the individual and, more generally, the evolution of his adult personality are largely determined by the type of education he received in his youth, by the ideas, habits, references that were inculcated in him.

at school or university, not to mention the lessons of life which he learnt in the family.

This continuity implies that the principles and the methodology employed in adult education should be applied as far as possible in the initial period, modified, of course, according to each age. As the International Commission for the Development of Education stated in its report: "The idea of lifelong education is the master key to the educative society." (1) But if educational activity goes on at all stages of life, it is clear that the early stage at school no longer has the same objectives as traditionally. No longer is it a matter of equipping children with cultural baggage but rather of facilitating in each of them the development of attitudes and capacities which will enable them to cope successfully with the challenges they will have to face.

With this perspective, the teacher/pupil relationship is completely changed. The agent of the educational process is no longer the teacher whose knowledge has to be assimilated, but the individual himself acting in the process of his own development. Putting the emphasis on the individual means having confidence in his powers. Traditional education is built on a restrictive view of man and his condition. Its main task is to produce conforming people adapted to norms. By contrast, an education free from this model has entirely different goals. It encompasses the totality of systematic efforts to establish a living relationship between the individual and the world in which he lives. From this point of view, creativity is seen to be a fundamental concept.

3.2 Creativity

Creativity does not just mean producing original objects: first and foremost it is co-operating in the creation of one's own self. The biological facts and the variety of inputs are the raw material with which a person builds the different personalities that he will be in the course of his life. Through this self-creation he outgrows his immediate environment and escapes a pre-determined destiny; his existence becomes a historical continuum that has meaning and purpose.

Participating in one's own creation signifies becoming the thinker, the artist, the lover, the citizen, latent in every individual but never developing beyond the embryonic stage if he is not aware of his potentialities, of the fact that he has to

make an effort, or is absorbed in the day-to-day concerns of life. This last point requires particular consideration. Undeniably, the basic conditions of life, a lack of sufficient income and inadequate or unhealthy housing are often insurmountable obstacles to the growth of the individual. It is essential to realise this in order to see the limits of educational action and to place it into the framework of other efforts to improve the human condition.

Furthermore, the proper function of education is to help each person (so far as the conditions and circumstances of life permit) not to live by delegation - for instance, by leaving 'poetic' activities to the poet, by letting the thinker think for him and the politician judge and decide for him. Enabling people to make the world their own, not to be strangers in it, is one of the fundamental goals of lifelong education.

This creativity should be active in all spheres of the personality. The concrete being is body, mind, feeling, imagination. He (or she) exists at a given moment of time, at a given point in space. He maintains relations with other members of society, with the global society and the material universe. He questions the physical and moral universe to discover its secrets, he is engaged in a whole series of actions that are more or less directly related to his own condition. The different modalities of everybody's existence in this world are inseparably inter-linked. Traditional education, especially school teaching, does not take into account the complexity of this concrete individual. It artificially isolates one element, intellectual knowledge, on which it concentrates its actions. Such abstraction tends to generate imbalances, traumas, impediments to development and unjust situations, inasmuch as the ability to assimilate ready-made knowledge is unevenly distributed. In the perspective of lifelong education, this impoverishment and this distortion are rejected. The centre of consideration is the human being in his fulness and the richness of his potentialities.

If one accepts this view of the educational process, the system of instruction and education must be oriented in a new direction. It can only be accommodated and take on significance in a broader and more ambitious framework. What is necessary for the individual is not to assimilate knowledge, but to take possession of himself and of that part of the universe which is within his reach. The real programme, in the sense of content serving to attain objectives, consists in helping him to develop in the above-mentioned directions, and for this purpose to make systematic use of all his capacities in order to acquire the

competencies, indispensable for exercising his various functions: knowledge, expression, relationships and action.

3.3 Learning

In this context the notion of learning assumes full force and breadth. It describes the entirety of activities, practices and reflections through which everybody becomes what he is at the different levels of his personality. It is a very dynamic conception of education. Everyone knows that an adequate performance in sports and games, in the playing of a musical instrument or in some professional technique is only to be achieved after a long training in the various skills that lead to mastery of the activity concerned. Nobody becomes a skilled equestrian by watching horseraces, nor a pianist by going to concerts. Being a sportsman, musician or technician requires qualifications which express a mode of being, characterised by the acquisition of a variety of abilities and competencies. This statement, irrefutable in these particular cases, is of universal value in lifelong education. What it implies is, in fact, an active relationship with the world. Such a relationship exists in all fields of human activity, even in those where it is not generally recognised. Thus, the notion of knowledge consisting of the accumulation of a certain amount of information is replaced, in accordance with the thinking of epistemologists, by one which defines knowledge as perceptions of the world, as variable and specific as there are individual minds and particular situations.

Ideas, notions, are not like objects to be put into a cupboard; they have a meaning and reality only if they give a response to a question. Learning to question the world is an essential component of learning to live and to be, the essence of lifelong education.

In the firm belief that alternatives have to be found to the concepts and practices of traditional education, the members of the team assembled by the Unesco Institute for Education in Hamburg have explored the dimensions of this notion of learning and attempted to identify its implications for education. On this subject an explanation is necessary. Nothing is farther from the minds of these educationists than the old division into faculties. In all his actions the individual is wholly involved, and it is pure illusion to separate the intellect from feeling, imagination and will. Body and mind go together, and so does their development. Likewise, whether he is conscious of it or not, every individual obeys in his behaviour a system of values.

However, for the purposes of learning and its implications, it is necessary to distinguish between the various manifestations of the personality according to the time and the circumstances in which they occur and the specific needs or particular challenges to be met. For reasons of efficiency, the overall field of learning has been divided in this study into nine sectors: communication, corporal man, time, space, art, politics, ethics, technology and the scientific spirit. Each collaborator possesses wide and concrete experience in the domain he has chosen to study, and each has taken care to bear in mind the global and unitary conception of the development of the personality.

Taken together, these contributions lead to the conclusion that learning and lifelong education are intimately linked. It would be useless to ask everybody to study, to perfect himself, to develop all that is latent or unfinished in him, if the means to achieve this were not available to him. In part, these means are provided by the outside world, by the various components of the environment. But essentially the individual has to find them within himself. It is he himself, as has already been said, who is the principal agent of his own development, if only because outside aid can only be temporary and intermittent. For the largest part of his life he is reduced to his own resources. Nobody can think, feel, or grow for him.

Does this imply that he should isolate himself? That would be totally foreign to the true meaning of autonomy. Freedom does not mean independence. On the contrary, each of us depends on others and, beyond the limited circle of immediate relationships, on the whole of humanity across time and space. The quality and breadth of relationships with others, participation in common efforts, constitute the indispensable support for any personal venture. Between the individual and the collective, these two elements of the human condition, there exists a dialectic movement that cannot be interrupted without serious damage to both.

Nevertheless, each epoch presents a particular combination of these two elements. One may feel nostalgic about the great periods in history when the collective and the individual spirit were in accord and harmony. There have been periods when the majority of the population had a common credo, a common hope. These times are past. Collective responses have become fragile and transitory. Whoever tries nowadays to live in the intellectual and moral security provided by a set of dogmas quickly finds himself expelled from his tranquillity and obliged to take a personal stand. Any kind of dogmatism has become, as Kierkegaard

says, "a fatal malady". No one who wants to stay alive can avoid rooting himself solidly in his individuality and his originality. The price he has to pay for this is high: an educational effort mobilising all his energies and all the resources of his personality.

Without diminishing the importance of the social and political struggles that aim to establish a more just order in society, lifelong education is a decisive factor in equalising opportunities and creating a democratic way of life. Through its implementation the distinctions based on the degree of education received tend to disappear. Everybody finds himself in the same situation, that of an unfinished being limited in his experience, but rich in potential and originality. Everybody has to face the same necessity of making use of his capacities and progressing lest he lose contact with the vital principles of life.

NOTE

1. Faure, Edgar et al. *Learning to Be: The World of Today and Tomorrow*. Paris: Unesco; London: Harrap, 1972.

Chapter 2

Synthesis of the Study

P. Lengrand

1. Presentation of the Study

This study of learning has been entrusted by the Unesco Institute for Education in Hamburg to a team of nine scholars, each of whom has undertaken to write a paper on one aspect of the problem.

Nine areas of learning have been identified as being of central importance and playing a determining role in the development of personality. There has been no intention to render an exhaustive account of the multiplicity of manifestations of the human being in all spiritual and corporal domains. However, in the light of experience and reflection on this experience, the nine themes of this study appeared to cover a large part of the terrain in which the educative process, as described in the last section of the introduction, takes place.

A working team was then assembled. It consisted of nine members, each a specialist in the field entrusted to him. These members are: José María Cagigal, Spain (Corporal Man); José Mariano Gago, Portugal (The Scientific Spirit); Brian Groombridge, United Kingdom (Communication); Haruo Kitagawa, Japan (The Ethical Domain); Alberto Melo, Portugal (The Citizen); Paulo Novaes, Brazil (Technology); Gaston Pineau, Canada (Time); Guy Saez, France (Space); Irena Wojnar, Poland (Art). The co-ordinator of the project was Paul Lengrand, France.

The preparation of the study had a dual character - individual and collective: individual, because each contributor was responsible for the orientation of his contribution on the basis of his own experience and personal reflections; and collective, inasmuch as the nine specialists met twice to exchange ideas, confer and discuss. At the first meeting, in November 1978, the

basic directions and orientations of the contributions were discussed. At the second meeting, in October 1979, the members of the team presented their findings in a provisional paper. In both cases the ongoing work was critically examined: many objections, reservations and questions were put forward in the discussions. But out of this intensive exchange arose a basic accord on the spirit in which the research was to be done and on the results obtained. Consequently, each of these contributions is the expression not only of a personal approach but also, and essentially, of a common view of the problem of learning.

1.1 Character of the synthesis

The co-ordinator of the study was requested to present a synthesis of its different parts. This synthesis is not a summary. The individual texts, which together make up a document of exceptional richness, will have to be read in full. The aim of the synthesis has been to highlight a number of essential points in each of the contributions and to indicate the fundamental relations existing between the areas studied. In fact, there are no frontiers between these different manifestations of the general phenomenon of learning: they are only different ways of regarding or approaching a basically coherent reality. The order in which the papers are presented follows no logical or hierarchical sequence; each theme is as important and universal as the others.

2. Nine Areas of Learning

2.1 Communication

The theme of communication occurs in the majority of the contributions. According to Groombridge the possibility of exchanging ideas and thoughts and of communicating sensations and emotions is a characteristic of man. It is the chief mark of distinction between the human species and other animals, with whom man shares the corporal dimension, sociability, time and space, but whose modes of communication are at best rudimentary.

Currently, this capacity of man "to get out of himself" and participate in the life of others is being seriously questioned by a whole school of thought. The theme of incommunicability is in fashion. It accounts for the success of Samuel Beckett's plays, Antonioni's films and their followers on both

sides of the Atlantic and beyond. According to them, man is condemned to isolation, and it is pure illusion to think that he can penetrate the secrets of others' thoughts and feelings.

The welcome these theses have received reveals a widespread and dramatic change in the relations between individuals, the sexes, the environment and the way of life in our civilisations. But the awareness of existing obstacles to communication in no way diminishes the importance of communication as a manifestation of humanity. As Groombridge says: "Everything that is distinctly human depends upon it ...".

This author stresses the complexity and ambiguity of communication. It embodies both the psychological and sensory processes of exchange as well as the material means of facilitating and multiplying the occasions and possibilities for the circulation of ideas, information and the different expressions of art, science and technology.

The problems concerning the production of means of communication, especially the mass media, are not new to education. That is to say, the general level of education of a population, its ability to react to the contents or the quality of the messages disseminated, will sooner or later influence the policy and strategy of the media. From the viewpoint of learning, the accent is on the production and reception of individual messages. In this respect, Groombridge pays special attention to the problem of oral or written language. Experimental psychologists have found that, in contrast to other faculties which diminish with age, abilities of expression and mastery of language can be perfected throughout life.

A number of learning objectives in the field of communication are presented in Groombridge's paper. Generally speaking, "the goal is for any individual to be articulate and expressive in a variety of media and to be critically responsive to messages in all media...". The author emphasises some specific points:

- Language means not only the use of words but, as in dancing, acting and singing, it is necessary "to be eloquent with the body ...". In this context, particular attention should be paid to the voice and to the best possible utilisation of its resources for intelligibility and expressiveness.
- It is necessary to get away from the tyrannic exclusivity of beautiful language, defined by a given

Groombridge. The space in which individuals and groups live is equally important for communication. Groombridge has already emphasised the role played in this respect by the way in which school space functions. But the statement goes far beyond any particular institution. It applies to the totality of life spaces. To take only one example: the structure of a traditional village with its work, its leisure, its festivals and rituals, such as the collective celebration of births, weddings and funerals, are admirably suited for the communication of the facts of everyday life. Conversely, the space available to the inhabitant of a large city reduces him to isolation and non-communication: it frequently happens that the arrival or departure of a tenant on the same floor of the building is not even noticed by those who live in the adjoining flats. Space is at the same time an environment, an instrument, and a symbol of exchange or non-exchange. The invention and bringing to life of spaces of communication is thus a fundamental necessity for the builders of houses, leisure-time accommodation and means of transport.

Communication is both a condition and a product of political life. A citizen can exercise his functions only in a society where information flows freely and widely. The application of this principle to the use of the mass media has been mentioned above. To make the necessary choices and participate competently in the decisions concerning him, every member of a democratic society needs the communication of all sorts of facts, economic, social, cultural or political, to enable him to form an enlightened judgment of the affairs of the state, community or firm in which he works.

In another dimension of communication, that of the development of relationships, participation of individuals in political life will bring them out of the isolation which is one of the banes of urbanised industrial societies. Apart from the objectives pursued, the fact of belonging to a party, a trade union, a co-operative or any other group of a socio-political nature, of playing a role within it and participating in collective action is a fertile opportunity for communication. Common interests and activities are valuable occasions for exchange and for mutual recognition and education. Finally, a set of values underlies communication. This is an aspect fully developed in the paper on learning in the ethical domain.

2.2 Corporal man

Nothing throws more light on the abstract, biased and incomplete character of traditional education than the place assigned to the body. With a few exceptions, it might not exist. This attitude is emphasised from the start by Cagigal in his study on Corporal Man: "... formerly, the educative value of the body was generally scorned - or not realised - because it was regarded as a mere instrument, support or object ...". As against this paradoxical situation, "corporal man may be recognised as a basic element in the educational task in general. ... It conditions everything else: thinking, willing, feeling. Man is involved 'bodily' in his very thought, volition and emotion".

Cagigal amply illustrates this intimate union between corporal development and the development of the personality. Starting from the famous adage, "*Nihil est in intellectu quod prius non fuerit in sensu*", he shows the role played by two basic elements of corporal reality: the senses and movement.

After recapitulating the theses of lifelong education and emphasising the urgent need to bring education close to life, the author draws the conclusions for corporal reality. The guiding principle of initial education, which serves as a basis for all succeeding stages, is to recognise that the child "is above all a present reality, fully justified in himself". The author adds the fundamental observation: "The more seriously this present reality that is the child is taken and respected at each stage of his development, the greater will be the guarantee of success in the future adult."

According to Cagigal, traditional education favours the model of a strong and dominating person whose *raison d'être* is ambition and self-assertion at the cost of others; the result is frustration and discontent. By this route, man becomes a stranger to himself who confuses the acquisition of goods with development of the person. Cagigal adds: "The cause of this maladjustment is not just contemporary social organisation; it is rather a primary shortcoming of the personality itself, a substantial vacuum."

In all the processes that lead man to take possession of what is essential to his existence and constitutes his authenticity, the body is the domain of *being* and not of *having*. Where as in spirit one can escape from time and space, it is not possible to get out of one's "corporal cover", which makes its

linguistic model. What is important is "intelligibility, which calls, in effect, for a range of mother tongues".

- Communicating means not only expressing oneself. It implies also, and particularly, being able to listen and to understand. Only then is communication possible and fruitful.
- An ability to decode and evaluate the messages received through the mass media is required. "The grammar and the conventions of all media need to be understood ...".
- Expression must be supported by logical thinking, "... by awareness of and skill in various modes of thinking, reasoning, deciding and feeling".

The presentation of these objectives is complemented by a number of suggestions concerning their implications for programmes and methods. Beyond the recommendations that arise naturally from the stated goals, such as initiation into the use of the media, Groombridge lists a number of principles that should serve as guides in the learning of communication. He starts with a warning. Communication, he maintains, is not always good and desirable. Taking diplomacy as an example, he writes: "Sometimes, social cohesion may actually depend upon concealing meaning, so that what is communicated is an overwhelming desire to live at peace, or to avoid anarchy and break-down."

He questions the importance attached to written work in school programmes: "Research in Britain, analysing different kinds of writing for different purposes, shows that for many children, learning to write does not mean learning to communicate. It means making yourself available for appraisal, even making yourself vulnerable - the chief purpose of writing in school and college being to facilitate assessment and control. Teachers ask questions without having a genuine interest in the answers. Obviously, they often already know the answers, but the effect is that a dominant feature of pedagogy is profoundly bogus and, to a greater or lesser extent, known to be so by all parties."

In this connection, let us recall what has been said in the introduction about the methodological aspect of adult education. It is becoming increasingly clear that the establishment of an active relationship with the world, and the acquisition of attitudes conducive to knowledge, develop far more effectively through the exchange of experiences and the discussion of, and confrontation with, various viewpoints than through one-way distribution of a fully elaborated and codified science.

Far from attacking the school, the author pleads for the organisation of a school community "within which authentic communication may take place ...". In this context, the hidden curriculum - that is, the way in which the school is conceived, established and in which it functions - plays a decisive role.

The author also advocates an interdisciplinary approach to communication, an approach where philosophy, art, literature, semantics, psychology, information, and anthropology each have a contribution to make.

The article finishes with a number of propositions relating to the educational use of the mass media. The media fulfil their function of communicators only to the extent that the audiences have learnt to view and to listen critically.

The other areas of learning are more or less directly linked with the problem of communication. It has already been pointed out that Groombridge highlights the corporal nature of many of the means utilised for communication. One might be tempted to limit this role to the expression of emotions and sensations, where words cannot replace gestures, attitudes and the thousand-and-one ways in which one person shows his like or dislike of another. But certain cultural contacts demonstrate that a gesture can be a powerful vehicle of thought and an effective sign of decisions.

Art is essentially an instrument of communication. This function is amply dealt with in the paper on art as one aspect of learning. Exchanges take place at different levels. The creator of forms - whether they be literary, visual or musical - works for a limited public, from the few readers of abstruse poetry to the huge audiences at a concert or religious mass and the flood of visitors to an architectural treasure. But rarely does an artist who is a real innovator find immediately the comprehension or interest he hopes for; his personal language or style has to be deciphered and assimilated. For real participation to come about between the painter and the spectator, the latter cannot dispense with learning which sometimes bristles with problems. Taste and aesthetic pleasure develop only through continuing effort, which complements and reinforces the immediate and instinctive perception. Only then can a creative person 'speak' and be understood.

There is also a technology of communication and a learning of the technology. This point has been thoroughly discussed by

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presence felt at every moment and in every place of experience. Acknowledging man's corporal reality, turning it into an instrument for perception, using its resources for expression and communication, thus appears to be one of the essential objectives of that learning to live and to be which is central to our educational concerns.

In this context, the author warns against two contemporary deviations: first, the commercial exploitation of eroticism through advertising and forms of public entertainment; and second, the pursuit of achievements and records which has altered the nature of sports. Obviously, physical education should not be oriented in these two directions. Cagigal describes a number of elements he considers important in the utilisation of physical capacities. He stresses the importance of *action*. Without doubt the process of maturation is largely directed by the genes. However, physical capacities do not take shape nor develop passively, but through an active exchange with the environment: "It is an active dynamic synthesis."

In this perspective, Cagigal illustrates the part played by three components of vital experience: the ego, other human beings, and material reality. He again stresses the role of action at all stages of development. Thus, he writes about a process of communication in which the body is involved at a higher level, that of language: "The emergence of language is not an isolated event, but the result of an activity in which corporal tonicity plays an essential part." In support of this statement, he recalls the teaching of Piaget, who demonstrated the importance of physical motricity in the development of intelligence and, more generally, of the different levels of personality. He also invokes Freud, whose thesis of the omnipresence and significance of the physical in life he accepts and utilises, and he describes the ravages that can be caused by ignorance or neglect of these physical factors, including repression of the different expressions of the libido.

Then follows a most interesting discussion on the various functions of the brain, which leads to the conclusion "that for a real enrichment of the subject, experience and information must become as 'personalized' as possible ...". After reviewing the contributions of those scientific disciplines that have established the link between intelligence and psycho-motricity, the author states, paradoxically: "Great progress towards a genuine and deep general education would be achieved by replacing, without further ado, Teacher Training Colleges with institutions

for training physical education teachers, provided that such training was properly interpreted."

The body and physical education are involved in most areas of learning. The role they play in and for education has already been indicated. They belong equally to the twin domains of time and space. The body is placed within a time-span. It is born, develops, deteriorates and dies. Each of these phases raises specific problems of adaptation calling for particular kinds of learning, from experience of space to social and sociological aspects. But first and foremost, adaptation is corporal, for it is through the body and the senses and, as has already been said, through motoricity that the individual takes possession of the physical universe which serves as the frame for his existence.

The relationship between the transformation of matter by technology, on the one hand, and corporal reality on the other, is evident. The development of mental capacities and that of manual abilities are closely linked both in the species and in the individual. A profound study of this relationship is to be found in the chapter on technology.

The corporal existence of man has a special place in the area of learning that concerns art. There is no need to point out how widely the body has served as inspiration and model for a considerable part of artistic expression. From the remotest times it has been central to the visual arts. In ancient Greece, corporal harmony became the supreme expression of a balanced personality. In our own time, it is tending to lose ground as representational forms of art are gaining ascendancy over those in which the body and the face are the main forms. However, to most people it remains a major field of artistic experience, sometimes the only one. To model one's body in accordance with the permanent or transitory canons of beauty, to adorn it, groom it and dress it - in such activities as these the body constitutes the subject and instrument of artistic expression.

2.3 Time

One fundamental objective of learning is to establish a positive and living relationship with time. Nobody can escape from time. As Pascal said: "We have embarked." We cannot turn the clock back nor arrest the march of time. This theme has inspired many poets, most often in a melancholic way. What time

has in common with the body is its meritability. One can live, like Robinson Crusoe, outside the political, artistic, even the technological world, but time is always there, always playing an active part. The link of time with lifelong education is inherent in its nature, as Pineau points out at the beginning of his chapter. It is not only a dimension of our experience, but the very thread that runs through all our particular experiences. It is also in large measure the substance of our learning. This relationship of time with lifelong education manifests itself in a variety of ways.

Understanding time means understanding the future, seeing every phenomenon in its historical sequence. What is most important, especially in life and everything affecting life, is to be aware of the process that leads through life and its various stages and transformations to death.

This condition of every living organism applies also to groups, societies, forms and ideas. Consequently, perceiving the reality of a thing, a phenomenon, a life, means understanding it in its evolution, its development, its continuity and discontinuity, in the regularity of certain changes and the critical nature of some of its phases.

The future has a destructive character. Organisms and systems exist only for a certain time, then disappear. This aspect is the best known, the one of which we are most aware. But the future also has another characteristic, as ubiquitous as the first. It is a component and an indispensable instrument for any creative process. Things become what they are in and through time. This creativity of the future is most evident in the human being. Man is an unfinished being: unlike many other living organisms which enter the world fully armed, equipped and programmed, he needs a considerable number of years to take form and to develop his diverse potentialities. As Pineau explains in his contribution, this fulfilment of the personality results from a synthesis between what is genetically programmed and the entirety of activities man undertakes. Etienne Lwolf, an eminent biologist, recently said: "Man is programmed to learn." Through the moments, circumstances and stages of his particular existence, the individual becomes what he potentially is. It does not happen without difficulties, dramas and sacrifices. But this evolution, which does not differ in nature or principle from any other development, be it of a system of ideas or a work of art, constitutes the originality and interest of human existence and gives it profound meaning.

Pineau discusses at length another aspect of time which is of a qualitative nature. He states that in industrialised societies, time is monopolised by production, domesticated by the wrist-watch. In the thinking and practice of those who organise, promote undertakings and educate as a profession, the only time taken into consideration is the day-time. The fact that our existence belongs equally to the night is generally ignored or neglected. Pineau draws the attention of those who are trying to establish the foundations of lifelong education, to the place, importance and use of the night-time, which occupies a good part of the 24-hour day. According to him, this is the best period for self-development, the time when the individual gets away from authoritarian modes of instruction and education, which are in part foreign to his specific temperament. The sleeper is an unconscious actor in multiple and complex transformations. Pineau's text is rich in analyses aiming to show the importance of this time and in suggestions of how judicious use can be made of it. The principal concern of this author is to lead the individual who is being educated away from the paths that end in alienation. On the basis of these attempts to understand the value and the functions of time, a number of attitudes and kinds of behaviour constituting the substance of learning in this area are required:

- thinking historically, that is grasping the events occurring in life and the components of experience in their development, their conflicts and contradictions, their affirmations and negations, in their death and (re-)birth; in other words, introducing the dialectic element into the universe of thought;
- being aware of oneself as a historical reality which, across the succession of events and circumstances, constitutes an organic unity;
- accepting change and participating, so far as is possible, in activities aimed at bringing about necessary changes;
- integrating the aspects of the nocturnal dimension of time into the totality of experience;
- endeavouring to establish a reciprocal penetration and dialectic relationship between day and night, the two components of lived time;
- introducing the temporal dimension into all sectors of instruction and education. Time is not a speciality of history programmes, but a fundamental component of any teaching, whether literary or scientific.

Two areas of learning that make a special contribution to awareness of the temporal dimension are space and art. Space and time are intimately linked, in reality and in thought. This relationship is discussed in the following section. No less essential is the contribution of art. Art links us with the past, from the origins of *homo sapiens* and *homo faber* to contemporary man. It is, besides, a perfect illustration of the necessity for change. Any form of static, unchanging art deteriorates and fails to fulfil its function of creativity. It becomes academic, at best artificially sustained by virtuosity. The development of a painter, a sculptor or a musician who evades the traps of repetition, furnishes the best example of lifelong education: by this means the individual, as an artist, takes possession of himself, becomes master of his vision and achieves his originality through successive experiences, some of which are of a dramatic and critical nature.

2.4 Space

Time represents the vertical dimension of human experience, space the horizontal one. Both are intimately interwoven. Saez recalls Piaget's finding that the stages in the structuring of an individual's psyche coincide with the stages of his structuring of space, of that image of space which he builds up. He adds that "space has become problematical".

What actually should be considered as the space of an individual? The part of the territory he occupies physically, or the entirety of objects and people with whom he is familiar? The space of work or the space of leisure, of transport? The physical space studied by geographers and town-planners (regional, national, international, planetary, interplanetary space)? The cultural space of international relations, or the relations between civilisations? The daily living space or the image of space? To some people, it means the religious or spiritual space represented by the church or the concert hall. All these spaces act upon us in various ways and to different degrees, and we may or may not react to them. How can we, through space, get a better understanding of what we are, what we are living for, what values we prefer? Saez says: "In principle, our relationship with space is our relationship with others, with culture." From this point of view, we are witnessing a dual process: an extraordinary enrichment of the spatial experience of the whole populace through the agency of the mass media which, all day long, enable everyone to participate in what is going on throughout the world; and on the other hand, a no less spectacular

impoverishment of individual space, often restricted to the abstract universe represented by the structures of industrial life and summarized in the French slogan, "Métro, boulot, dodo" (underground train, food, bed).

Of all the areas of learning discussed, space is perhaps the one on which the individual has the least direct influence. It depends on decisions and designs which are largely beyond his control. Hence the importance of the role played by town-planners, ecologists and, in the last analysis, by politicians. In this perspective, Saez's contribution provides a wealth of analyses and propositions for a general strategy of space management.

However significant the preceding remarks, the fact is that a pedagogy of space exists. The scientific disciplines of town-planning and ecology "must not isolate themselves". They should be considered as 'practical arts' that can be learnt by everyone.

The third section of that chapter outlines a strategy for the appropriation of space, based on the "desire to belong somewhere" which is at the same time a "desire to be".

Where should this re-unification of space begin? Without doubt, where our whole perception of space is organised, with the body. Next, a search for "pertinent spaces" is necessary. How can they be fashioned into tools for a better understanding of oneself, of others and of the world? On this subject, the author draws on the research done by Bailly on the perception of space. Bailly underlines the importance of the analyses made by the School of Chicago, which, in the search of an "ideal space", has emphasized the notions of unity and of neighbourhood as the environment most apt to develop a process of mutual education and individual self-education.

Subsequently, Saez stresses the development of associative life (*vie associative*). "The number of associations in a given area and the number of participants in those associations, indicate the degree of intensity of its community life."

The temporal dimension also enters into the search for appropriated space. Space "speaks to us of time, and time inscribes values into space. Town space and rural landscapes, with their composition and their contours, are open books. This remark opens up endless scope for learning in the history of man's

development and his creativity. Next, the notion of educational space is examined. Saez has an extended vision of this concept: space is educational because it continuously emits signals and translates values. In the more limited perspective of organised education, he indicates the need for a connection between sport, study, artistic and recreational activities, and for communication between the various social times of adulthood, old age, adolescence, childhood, the time of men and of women, of work and leisure.

A pertinent analysis of the relationships between space and power investigates the notions of freedom, socialisation, social control, and the relationship between open and closed spaces. Here again learning is required - learning how much freedom can be attained by an enlargement of our spatial experience beyond the constraints of a narrow community life. In conclusion, Saez asserts, "The lived-in space of the adult is a perpetual quest to come to terms with determinants and constraints: the problem of individual freedom also arises in terms of space".

The roles and functions of communication, the body, values and politics have been outlined in the preceding sections. Art makes an outstanding contribution to the construction and use of cultural space. The beauty, charm and expressive power of the places where man lives, works and spends his leisure time establish affective links between him and his territory. Through art - visual, musical, poetic and literary - he finds himself in communication with the diversity of expressions of the human condition beyond physical and political frontiers. Marquet, Ravi Shankar, Solzhenitsyn, Mizoguchi - paintings, music, novels and especially films - enable us to become compatriots and contemporaries of Western and Eastern societies as well as of Americans in both continents.

2.5 Art

Art occupies a minor, marginal place in most educational programmes, for children and adults alike. This is typical of the abstract character of education, the reasons for which have been shown in the Introduction, and it reveals a dangerous ignorance of the laws governing the development of personality. Aesthetic perception of the world is just as necessary and fundamental as conceptual perception. The development of the capacities of expression in this field as also in communication with

original forms of creativity, are themselves decisive elements in the individual's coming to terms with himself and with the outside world.

In her contribution, Wojnar emphasizes the danger represented by this lacuna in educational thinking and still more in educational practice. According to her, art education is a combination of two distinct but intimately linked elements: education for art and education through art.

Her examination of the objectives to be attained is preceded by an analysis of the role and functions of art in the development of the 'spirit', the senses and the emotions as well as in the comprehension of the human condition. The different elements of this argument are discussed in detail, emphasizing the following points:

- First, she quotes the philosopher Bergson, who said, "Human life has its *raison d'être* in a creation which, unlike that of the artist or the scholar, can be pursued at every moment by every human being - the creation of himself by himself ...". The theme of creativity applied to the personality, which is the basis of the theory of lifelong education, runs through the entire chapter on art education. In developing this point of view, the author adds, "... it must be realised that (art) encompasses both the cultural heritage and the way of life".
- In contrast to a functional, pragmatic and utilitarian concept of education, it is more appropriate to emphasize the dimension of the spirit and of the poetic in human life, which has become too fragmented, too superficial. Art plays a fundamental role in the process of harmonizing man confronted with a technocratic and consumer-oriented civilisation.
- A certain dualism of art helps to understand its role in human expression. On one side, there are the so-called Apollonian arts (including the visual arts) which are related to production and linked with manual activities. They encourage contemplation and have a soothing effect. On the other hand are all the dynamic arts, called Dionysian (in particular, dancing and music) which bear witness to the most vivid psychological processes.
- Art is not escapism. On the contrary, art is the only domain of human creativity that constitutes a synthesis of perception of the world and its sensory interpretation.

Art is a means of "making the world one's own" through development of the senses as well as through corporal expression. The text amply demonstrates the multiplicity and diversity of ways that lead through art education to this conquest of the self, both as an individual and as a participating member of the various communities to which he belongs.

- Many suggestions are made on the theme of education for art. From this point of view, modern aesthetic sensibility is considerably enriched by contact with artistic creativity from the Third World as well as with different forms of popular culture.

Education for art should prepare for as large as possible an acceptance of the diversity of artistic expression. The opinion that the art of the past is superior has to be avoided as much as the opposite view, often held by the young, that art was born in our time. It is an education in tolerance, openness and personal choice, irrespective of fashions.

The author also tackles a problem of crucial importance and urgency in some countries: To what extent is moral education a function of art? Two types of answer are given to this question: The first is that art should serve to produce noble sentiments and convey a lofty conception of human destiny by directing the emotions and the imagination towards a kind of identification with heroes who personify desirable ideals and values. The other conception stresses the aesthetic and liberating effect produced by the "dramatic values of art". Dramatic works do not present models to be followed, but show man as he is, "involved in complex and irresolvable situations". The problematical hero is an ambiguous person who inspires neither sympathy nor repugnance but encourages reflection leading to compassion and understanding.

Greek tragedy, the works of Shakespeare and most contemporary works belong to the second conception. However, in the first years of life, when the foundations of moral ideas have to be laid, the first conception seems appropriate.

The contribution of art to intellectual development is no less important than its role in the moral domain. Art not only makes the objective reality more readable through training the senses, it also constitutes a cognitive act. It promotes the acquisition of personal knowledge, knowledge derived from experiences in which the intellect unites with the emphatic faculties and with imagination as opposed to knowledge acquired

through the accumulation of ready-made information. Art is an element and a model in the construction of original knowledge, which everybody builds up from his own experience and the communication of what others know. This knowledge concerns the different dimensions of the physical and moral world as well as all the problems associated with the human condition.

This part of the article ends by recalling the importance of imagination, conceived of as the faculty of invention and innovation, in every aspect of the development of personality. The creative powers, developed in art education, affect and are applied to all the other sectors of human activity.

All the above considerations constitute objectives for learning in the domain of art. On a more practical and immediate level, however, problems of cultural and educational policy arise. With regard to cultural policy, a concern already expressed should be remembered: it seems essential to consider the culture of art "not so much as an acquisition, a product, a result, but rather as a creation, an action, a movement linked with changes in the economy and in social relations". However, as a group of Unesco experts have stated, it should be asked whether in this process of innovation the creative function can prove fertile when memory does not place a capital of acquired knowledge at its disposal. There should, therefore, be an integral art education in which the two orientations, respect of lasting values and of creativity, are taken into consideration.

The author emphasizes the necessity of transforming school programmes so as to give art education the ample and fundamental scope it deserves. This requires a de-partitioning, both in educational policy and in instruction. Every discipline that contributes to the development of the aesthetic dimension of being is affected by this perspective. The teaching of history, of geography, corporal education as defined by Cagigal, the use of media, even the learning of mathematics and biology and the practice of technology - each of these can help individuals and groups to learn art appreciation and artistic expression.

2.6 The Citizen

Politics is everybody's business. This does not seem as evident as, for example, the inevitability of the body, of time and of communication. But except in the utopian situation of Robinson Crusoe, everyone is caught in a network of power struc-

tures which determine in large measure his existence and his experience in innumerable fields. Many people ignore this reality or even reject it. To part of the general public, politics is a matter for professionals, those who have chosen it as a career or who benefit in some way from the exercise of power. "I am not a politician," it is often said, with a note of aloofness, if not of disdain, towards those who are.

Until recently, there was also a marked division by sexes on this issue. Politics was considered the business of men, whereas the job of women was to administer domestic affairs. This idea still persists in some quarters and some countries.

In his study Melo stresses the universal character of the political dimension, first for understanding the evolution of the world and the forces that influence it, and second for finding one's place in this world of forces and powers and actively fulfilling the responsibilities in this field which are incumbent upon citizens as a whole and as separate individuals. Political education is defined by the author as follows: "The attainment of an integrated political self, a deep understanding of how one acts in society, how one thinks and feels about social issues, how one expresses ideas and tries to influence people or events ..." In this respect, "three different ways of relating to politics are outlined ...: political knowledge, political opinion, political action".

In this general context, three sets of objectives can be defined to develop learning in the political dimension of man:

a. *Knowledge*

Comprehension of politics requires knowledge of the elements that constitute the substance of a society as well as of the factors that influence its evolution and the changes it undergoes. While politics should not be confused with sociology or economics, or with administrative and constitutional law, the social sciences do have an essential contribution to make to the comprehension of the forces that act in one way or another, as well as to an awareness of the nature of power in general and of powers in particular. In the development of political awareness, as strong a sense of history as possible should be developed, together with knowledge of the events that preceded and now underlie our epoch. In the present context, this is one of the most direct, the most necessary applications of history, as is pointed out in the chapter on time. The place and the role

of history in educational programmes is at present a subject of most impassioned discussion. What seems to have been established is that the world in which we live is opaque, impossible to interpret and without significance unless it is illuminated by knowledge of the consecutive struggles that have contributed to the foundation of democratic societies, to the recognition of human rights, to the emancipation of workers, etc. To give only a few significant examples: It is not by accident that the ardent revolutionaries of 1789 were inspired by Plutarch, and that the Russian revolutionaries of 1917 were nourished and sustained by the lessons of the French Revolution in 1789 and of the Paris Commune in 1871. To be linked with our past is a necessity both on the political and on the cultural planes.

b. *Information*

The citizen in a democratic society is regularly called upon to express his mind on local or national situations and problems, to choose among a certain number of solutions that are proposed to him, and from time to time even to voice his opinion on the political orientation of the country and on the administrative system of economic, social and cultural affairs, according to one ideology or another. He also has to exercise his responsibility in electing those charged to care for the interests of the community, the region or the state. Faced with all these choices and decisions, the citizen must be enabled to see clearly. For this purpose, information is indispensable. Unless he is informed, a person will not be capable of taking on the responsibilities involved in citizenship.

The content and circulation of information is in itself a political problem of the first order. It has technical and financial aspects, but above all it is related to the nature of the politico-social regime in a given country. The level of concrete democracy enjoyed by the citizens depends in large measure on the degree, the kind and the quality of the communication diffused by the mass media, the press, radio and television.

But this is only one element of the problem. Information also implies a relationship between the transmitted message and the receiver. Whatever the content and quality of the message, it will remain a dead letter unless it can be decoded, interpreted and assimilated by the receiver, or if he meets it with indifference. This highlights the role of learning in that process. The knowledge referred to above is valuable in this respect. But what matters most is the formation of judgement, the ability

to discern what is imperfect or subordinate, likely or unlikely, established or hypothetical; to distinguish a fact from an opinion; to be wary of bias and fanaticism; to search for the causes of the communicated events and actions; to recognise the strong and the weak points of those to whom one delegates part of one's responsibility by means of a vote or other support. In the last analysis, a person is only truly informed if he has developed a critical mind regarding the sources of information, if he is wary of his own subjectivity and endeavours to attain a high degree of objectivity. This training in critical judgement is related to the development of the scientific spirit as described in Gago's contribution.

c. *Action*

Melo emphasises the role action plays in all aspects of learning for political life. This learning "takes place within very different frameworks: political parties, trade unions, co-operatives, associations, as well as (if one accepts the wide meaning of politics ...) at work, at home, etc". The importance of participation in these activities needs no further comment. It not only develops behaviours and creates attitudes but also opens the mind to aspects of political reality, to a comprehension of the relationships that exist among various powers, and generally of the way social structures work: no amount of study, however serious and profound, can replace the function of active participation so far as learning is concerned. It is in this domain that the link between theory and practice is most evident.

It should be added that for many of the world's population, participation in action is the major, sometimes the only factor in political learning. This applies, for instance, to the militants in resistance groups and to the African guerrillas whose learning of the basic elements of their political science through their struggles is often superior to that of the many members of so-called developed societies who are indifferent or passive towards anything that does not directly impinge on their immediate interests.

At various points in his article the author draws attention to factors which, though less directly political in their nature, exert a powerful influence on sensitivity and awareness in this domain. One such case is the family. Depending on whether it is of an authoritarian or democratic type, it turns the minds and attitudes of its members in one direction or the other.

The organisation of the school has the same kind of influence. A school which is open for discussion, where the pupil is taught not to accumulate answers but to question the world, where team spirit replaces the all-powerful and destructive spirit of competition, will develop approaches and behaviours of a democratic type in its future adults.

Finally, the author points out the relationship between political education and the other sectors of learning, especially communication, space, art and the scientific spirit. He takes as an example the teaching of literature, which can constitute one element of initiation into politics. What could be a better and more vivid introduction to an understanding of the issues in current political discussion - for instance, on the notion and origin of power - than reading the works of the great writers of the Age of Enlightenment, from Spinoza to Schiller via Voltaire, Rousseau and the Encyclopaedists?

It may be added that political activity conforms to the interests of the populations concerned only if it is founded on a number of essential values, first and foremost the principles of tolerance, freedom of thought and expression, observation of human rights and respect for truth and loyalty in relationships.

2.7 The ethical domain

This area of learning was the subject of much discussion at the working meetings of the research team. Indeed, some members held the view that it should not in fact be regarded as a separate learning area. This view no doubt reflects the crisis affecting traditional values, especially those that for centuries have been connected with the practice and teaching of religion. The light which the human sciences and philosophical thought have thrown on behaviour, and on the sources and reasons for this behaviour, has had something to do with this questioning of the moral approach. There have even been reversals. For instance, what was considered to be bad or condemned only a few decades ago, sexual desire for example, has now acquired a new significance and has gained acceptance.

Kitagawa is aware of this difficulty. With reference to Socrates, he asks the key question: Can truth be taught? His answer is in the affirmative, provided that a desiccated moralism is avoided and that the conception of morality is extended

by the dimensions inherent in the concept of lifelong education.

In Kitagawa's view, moral learning largely coincides with education in general. A moral man is one who is capable, in certain circumstances, of resisting the domination of the instinct, of sacrificing his personal interest for the sake of a cause, and for what are considered to be universal values. He is concerned about justice; in the inevitable duel between the strong and the weak, the oppressor and the oppressed, he tends to be on the side of the victim or the sufferer from unjustified domination. This is what makes him human, since the rest of the animal world knows only violence, appetite and instinct.

The author indicates a number of directions for this effort towards humanisation, similar to the central objective which Wojnar assigns to art. At the beginning of his paper, he recalls the principal "contemporary moral challenges". Under this heading he includes the conflicts between nations, races, civilisations and ideologies. "Hanging over all this like an oppressive cloud lies the horrible threat of nuclear and biological war". As a result anxiety, insecurity, boredom and, as a counterpart, violence have developed. In addition to the political and socio-economic aspects of this situation, there is a moral one: "The only solutions to moral problems are moral in nature." With the current collapse of traditional moral principles a need for new ones is felt everywhere. This new universal morality should be based on three elements: rationality, altruism and humanism.

With regard to rationality, Kitagawa thinks that it is indispensable to adopt a scientific attitude which aims at objectivity and a spirit of research instead of dogmatic attitudes. With regard to altruism, he recalls the teaching and the example of the great sages, such as Lao-Tzu, Buddha, Socrates, Jesus, Spinoza and the philosophers of the Enlightenment. "The elimination of greed and the love for neighbours are among the aims common to every humanistic philosophy or religion". To attain this level of "benevolence", people must strive for self-knowledge and the perfectioning of their nature in a process of lifelong learning. Confucius and Jesus have expressed the same idea: "...You must be born anew".

In this context, education pursues a two-fold end: "self-identification (identity) together with the promotion of easy, sincere communicability with others (empathy)". Kitagawa at-

taches great importance to the concept of maturity, which encompasses mental health as well as the moral aspect. To attain this maturity, three conditions appear necessary: firstly, a realistic spirit capable of perceiving the world as it is and of taking support from the solidity of the universe; secondly, the "benevolence" mentioned above; and thirdly, consideration of the general objectives of humanity that include and go beyond the limited interests of the individual and strictly personal objectives.

Finally, the author suggests a programme of activities and experiments which aim to develop moral behaviour in the framework of school education, concurrently with the influence of other agencies such as the family. He discusses the research and suggestions of authors like Peck, Havighurst and N. and S. Williams, who agree on the description of stages which lead beyond codified precepts to moral autonomy. This educational development is rich in propositions, among others the description of the person - teacher or *animateur* - charged with the moral education of a group. Summarising, he says: "a teacher is expected to be an example rather than a model".

The conclusion is that "morality can be taught at school, at least partly, in the form of intellectual training of moral reflection. However, the acquisition of virtue falls outside the realm of intentional teaching as such and remains a task of lifelong learning on the part of each individual." This makes it clear that the moral problem is present in all sectors of learning. Empathy and altruism are central to communication. The development of the individual towards a higher degree of humanisation has been recognised as an essential goal of education for art and through art. Equally, morality is involved in politics, which finds its justification and *raison d'être* in the consideration of values such as justice, human rights, communication between human beings and the establishment of structures of communal life through the building of a less egalitarian society. As Novaes shows, a judicious use of technological resources also depends on the consideration of moral values.

2.8 Technology

In the exploration of the universe, the head, the hands and the legs play a part. The role of the legs, and more generally of the means of locomotion, has been dealt with in the

chapter on Corporal Man. Cagigal has emphasised the predominant role of motricity in the development of intellectual capacities and in the equilibrium of the personality, while Novaes focuses in his chapter on the different modalities of manual skill and their incorporation into technology in relation to the other fields of human activity.

A large proportion of the objects of our experience become comprehensible only to the extent that we can actively intervene in their composition (or de-composition). As long as we cannot manipulate wood, the earth and its products, or iron, these elements remain more or less strange to us, and the knowledge we have of them is of an abstract nature.

The role of the hand, already substantial at the level of comprehension, becomes still clearer and more decisive at the level of creativity. True creativity cannot be exclusively defined as doing. It finds equal expression and is equally necessary at the level of thought. But it is most manifest in the transformation of natural resources into products bearing the mark of human intervention. This point has already been discussed in connection with the modalities of expression in the visual arts which, as Wojnar points out, are linked with production techniques. The painter, and more obviously the sculptor, translate and nourish their poetic inspiration through the manipulation of materials - canvas, paint, marble or bronze - with the help of a tool: brush, chisel, scissors or hammer. In this context the role of the tool and the importance of the way it is handled seem clear. They are even more evident at all stages of industrial production, from the making of stone scrapers and arrow-heads to the construction of interplanetary rockets.

This intimate and substantial relationship between the two elements of thinking and doing, which is fundamental to human nature, has been persistently ignored or neglected by most of the systems that have taken charge of the instruction and education of both children and adults throughout the ages. There has been an often radical separation of the programmes for so-called general education from those for technical education, and this fragmentation, this compartmentalisation, has been prejudicial to the normal development of the personality.

This division into sectors of education corresponds to a hierarchical conception of capacities which is in turn linked with the divisions in society. The intellectual element has

been reserved for the ruling professions, where the word is of prime importance, whereas the technical element has been assigned to those social strata which work in subordinate occupations. The result is an impoverishment that endangers the balance of the personality. The individual who has received a strictly general education has a very fragmented vision and practice of reality and cannot easily evade the tendency towards abstraction, while the person who has an exclusively technical relationship with the world is deprived of an essential dimension, that of conceptualisation. In the perspective of lifelong education, a fundamental objective of which is to help everyone to develop the whole range of one's potentialities, it seems essential to restore and maintain the cohesion of the two elements of education that are separated in educational practice.

In this perspective Novaes outlines a picture of the factors in the industrial sector of contemporary society which condition the areas of learning. To him, the ideal society from this point of view, as well as from that of education in general, is the one "in which individuals would contribute towards the common good by using their independent judgement". In contrast to this society, we are living in an "organisational society" with "hierarchical structures, arranged to combine the work of different specialists into a system set up to attain objectives independent of the individual aims of its members".

In this context, Novaes draws the outlines of a type of education he considers desirable:

- What we need, at the same time as training necessary for a particular occupation, is an education that "will make people inquisitive, critical, and capable of understanding possible choices and their implications".
- This critical spirit can and should lead to a choice of technologies that fit into the prevailing culture and which are compatible with the environment.
- Progress, and not merely growth, demands great care in the choice of technologies. This requires an education which aims to perfect man and not merely to make him productive.

- The specific role of vocational apprenticeship is stressed. "The best opportunity for an educational relation to develop is an apprenticeship." Moreover, the occupational work should not be entirely repetitive but should have a creative component.
- In order to ensure that technologies serve to develop man and not to destroy him, primary importance in choosing and using such technologies must be attached to the moral element of human activity. Without vigilant regard for individual and social values, they can have disastrous effects. We have to learn not to ruin man's environment, and this requires education in ecology.
- An understanding of what man accomplishes in and through his work "should indeed be an essential part of lifelong education". Novaes adds: "...but it is equally essential that what one does should be worth understanding".
- In the effort to help individuals to adapt to technological innovations, whether they concern the creation of a new process or a change of the environment, "the right course of action... is to adjust the technology to the people, and not the people to it".
- Among the factors of creativity in work, Novaes emphasises vocation. Using a poetic metaphor, he writes: "Following a vocation, however, is like falling in love. It can be delicious, or it can be a torment of frustration".

In the final section of his paper, the author discusses the education of managers. Their job is to see that the work, even if disagreeable, is well done. They have to be familiar with certain techniques in order to be able to influence and control others. For them, even more than for any other category of workers, it is necessary to respect moral values and to develop a critical and autonomous judgement, thereby giving preference not to the means but to the ends of work. If he understands his task correctly, the person responsible for guiding and controlling the work of others "is one of the important agents of

lifelong education".

The combination of manual skill and the use and mastery of tools is an aspect of most of the other areas of learning. Groombridge has discussed it at length in connection with communication, as has Wojnar in connection with art. The relation between the development of science and technological invention occupies an equally important place in the minds of all those interested in the history of civilisations and cultures.

From the point of view of time in its historical aspect, an observation concerning education is necessary. As a result of the socio-cultural split, mentioned at the beginning of this chapter, as well as of the hierarchy of human activities, the technological aspect occupies only a limited space in education concerned with learning about the past. The necessity to reserve this proportion cannot be emphasised enough, since an authentic and realistic knowledge of the history of mankind can only be acquired through a knowledge of invention and technical evolution. The construction of roads and cathedrals, the domestication of plants and animals, the transformation of the machine - from wind- and water-mills via steam engines to nuclear energy - are themes that are at least as interesting and instructive as dynastic wars. They have a dual educational value: the first is that the past illuminates technology; the second, that technology illustrates the past and furnishes a striking demonstration of human creativity at all levels of societal divisions.

Some countries have introduced educational programmes designed to bring general education closer to the world of technology. This is the case in many socialist countries, especially in the German Democratic Republic, where a great effort is being made in this direction. Equally worthy of close investigation are the initiatives of certain countries of the Third World which are endeavouring to establish a synthesis between productive activities and study.

2.9 The scientific spirit

Thinking scientifically means trying to perceive the world, to understand the relationship between appearance and reality, and to gain from this investigation a theoretical interpretation which satisfies the mind. This search involves a complex process encompassing the observation of facts, their definition, the study of the causes of a phenomenon, and the application of laws already known or the discovery of as yet hidden

laws to explain the links between a series of facts or events. This effort at exploration and explanation proceeds with the aid of hypotheses, experimentation, verification, demonstration, comparison and measurement which, when organised, assume the character of a more or less defined and systematised method.

Those whose vocation and/or occupation is the systematic study of a category of phenomena, naturally apply methodological procedures in which the two complementary principles of induction and deduction play a part determined by the scholars' temperaments, the circumstances and the object of the research.

But scientific thinking occurs not only in laboratories or in the work of scholars. It is equally necessary for the organisation of every individual's experience and for the conduct of his life.

If we want to avoid the traps of dogmatism, it is essential to preserve the curiosity of childhood, the 'Whys?' and 'Hows?' that accompany the awakening of the intelligence, the questions that are never satisfied with the answers. It is the will to examine, weigh and judge the messages and information contained in an act of communication that enables us to reject prejudices and preconceived ideas.

The scientific spirit is also an indispensable element in the fight against superstitions which convey a false view of reality and thereby sustain unjustified fears, such as the fear of the evil eye which is capable of inflicting harm or causing disasters, or a belief in the predictions of astrologers.

Though scientific thought does not automatically become a substitute for the philosophies and religions which interpret the human condition and human destiny, it is a fundamental element in everybody's quest for a link between the different facts and sectors of human existence. In this perspective Gago indicates the direction in which the learning of scientific thinking should be orientated.

A study of the various scientific disciplines, especially in the framework of school and university education, can make an important contribution to this learning. However, three basic remarks on this subject are necessary:

- Firstly, the field of scientific experience is not limited to the science disciplines. Studies in lit-

erature, history or geography also lend themselves to scientific treatment and demand particular methods. The development of the various genres of literature, and the transition from one political regime to another - while not free from accidental features and unforeseeable action by the people concerned - lead to an examination of the causes and laws that throw light on the creation of works and determine the succession of events.

- Secondly, experience has shown that, in the same culture or in the same individual, there are sectors in which the scientific approach predominates, yet which exists side by side with others where irrationality prevails. There are many examples of researchers in the various domains of science who are rigorous in seeking demonstration and proof within their professional work, be it physical or biological, but who are subject to mystical thought in their religious or ideological beliefs.
- Thirdly - and this is certainly the most important observation - the distinction between a scientific and pre-scientific society does not stand up to thorough examination. In this context Gago strongly advocates what he calls the "science of the concrete" as opposed to the learnt or "learned science" dispensed by school education.

This observation takes us back to the problem of popular culture, which serves as a leitmotif to the entire chapter. The analysis starts from the growing division of the social categories whose duty is "to conceive and direct" from those whose role is "to utilise and execute". Another division exists between researchers and educators. The researchers take no interest in whether the products of their activities and the modalities of their approaches penetrate into uninitiated quarters, and the educators have little access to the domain of science as it develops.

If a popular culture is to be firmly rooted, it seems imperative that the development and assimilation of knowledge should not be a speciality but should become a common activity.

According to the author, action in this field will not be effective "unless appreciable sectors of the scientific community engage in educative and open social practices".

What is necessary, therefore, is not to base the development of the scientific spirit on the organised structure of each science, but rather to help in devising methodologies for local research on the acquisition and transmission of popular attitudes and images in every domain of knowledge.

The activities of popular education movements make it possible to identify a number of approaches. The "concrete social reality emerges and reveals possible ways". The practice of these movements "collides head-on with the existing order of social relations and constitutes a source of conflicts and personal questioning" in all areas of life. The author indicates the role that could be played by procedures such as action research in which researchers and non-researchers participate in a fertile dialogue. He stresses the importance of including "social images" in the teaching of science, and the contribution a "non-compartmental, thematic approach" could make. He shows the way that leads to universality and extended knowledge through "the depth of knowledge about near-by objects and through the diversity of accessible practices. These theoretical foundations are explicated in the second part of the document under the heading "Fundamental issues".

In the sections entitled "Learned science" and "The science of the concrete" he develops his initial position. "... the benefits and consequences of the diffusion of the scientific spirit superimpose themselves upon a living social milieu which produces, acts, and knows". He contrasts the - essentially discursive - traditional school education with the science of the concrete, an example of which is the knowledge of agriculture "a young peasant acquires every day at the farm". School education comes up against two main obstacles to scientific research. The first is class distinction, or more precisely "the cultural barrier, the class contempt for learning of the concrete outside school education". The second consists in the absence of "criteria for the validity of models of interpretation". The school system completely lacks "stimulation of invention, discovery of the relations between phenomena", which is the key to any scientific understanding. The science taught at school is "prefabricated". Moreover, education such as it functions is "an excellent instrument for the selective exclusion of pupils belonging to the lower social strata".

After describing the unscientific climate characteristic of industrialised societies, the author proposes, as a partial solution for meeting the legitimate aspirations of the pupil's very real scientific curiosity, a more scientific and multi-disciplinary teacher preparation in regard to "analysing the perceptible concrete and ... reinterpreting common experience".

In the final part of his paper, he attempts to answer the crucial question: "Learning, what for?". In technological civilisations a social space is building up "within which individuals and basic communities are totally powerless to modify the conditions of their existence". It is a highly contradictory situation. Individuals cannot create their own knowledge though they are "constantly confronted with scientific technology and the "scientific rationality of objects and operations".

As a remedy, the author emphasises the actual and potential role of movements endeavouring to create or revive a popular culture. There are two ways of achieving this. Firstly, by establishing a network of "symbolic or imaginary perception" as compensation for the lack of an effective knowledge of reality. This he calls the "passive" way. Secondly, he recommends an "active" way consisting of the acquisition of knowledge or of actions always oriented towards the transformation of the concrete reality.

In conclusion he calls for the "creative power of life-long education" which could "help to overcome the social obstacles which prevent people from attaining anything remotely like the capacities they dream of".

The application of the scientific spirit to communication and political life has been substantially developed in the contributions from Groombridge and Melo. Both of them highlight the role that the critical spirit, whose approach is similar to that of the scientific spirit, plays in the establishment of an active relationship with messages and decision-making.

In his chapter on time as a dimension of learning, Pineau underlines the necessity of introducing the notion of "becoming" into the examination of all aspects of reality. To take this reality into account, the scientific spirit must be capable of crossing the frontiers of logical reasoning and become a way of dialectic thinking.

Kitagawa also points out that scientific rationality must

be one of the foundations of a new morality that rejects dogmatism, promotes tolerance and an understanding of others and sets the individual on the path to objectivity beyond the narrow boundaries of egocentric subjectivity. Like art, the universal character of scientific knowledge is a fundamental element for the establishment of a community of spirits across the broad spectrum of races, customs and civilisations.

Chapter 3

Communication

B. Groombridge

1. Communicating about Communication

Communication is the production and reception of messages; it is the sharing and exchange of information, feeling and meaning. Meaning is itself conveyed or distorted by the way messages are produced and received. Without it social cohesion is impossible; yet it may also be an instrument of aggression. Just as diplomacy may be 'war carried on by other means', so words, whether delivered by missionaries or pirate relay stations, can be an invading force. Everything that is distinctively human depends upon communication. Much that is characteristically human may be destroyed by it. Human beings seem capable of it to a unique degree and in a very wide range of modes, although this may be to some extent an anthropocentric tautology. The categories are themselves expressed in the languages of but one of the evolutionary protagonists: we have only rudimentary knowledge of the communication talents of other species, and by their hierarchies of value we may not be listed as the greatest or as nature's *mot d'envie*.

Our assumption of the exceptional quality of human versatility rests on knowing that most of us can use most of our senses; that we have evolved and invented a multiplicity of codes and languages; that we explore and play with signs and symbols; and that we have extended the reach and amplification of bodily communication through the use of media and the creation of enduring artefacts. Communications, transformed by technology, now forms a major part of all human communication.

There are topical reasons for the obsession in this century with communication. It may be an illusion, but we seem to have achieved some kind of consummation of the processes initiated by Vasco da Gama, Drake, and other circumnavigators - all of whom

wanted to put a girdle round the earth. We can transport ourselves round the earth. We can transport ourselves round the globe faster than sound, and we can send messages at the speed of light. The whole world is now notoriously one world, as inter-dependent - but also as fragile - as a house of cards.

The ambivalence of this achievement is symbolised by the ubiquitous portable radio receiver. It is readily obtainable almost everywhere. In many countries, it is cheap enough for children to buy with their pocket money. It is a liberating piece of equipment, but it is also a domesticated Tower of Babel, an instrument bringing lies and a multitude of unintelligible foreign tongues into every home.

Communication is not easy to write about. Physicists, trying to measure the position and momentum of a particle of matter, find that they cannot accurately do both at the same time. The process of observation disturbs what is being observed; scientists cannot wholly disentangle themselves from the objective world. A similar difficulty affects writing about communication. Communication is a pervasive aspect of all human experience; the word 'communication' is immensely ambiguous. The complexity of the subject has even tempted scholars into the paradox of failing to communicate by writing unintelligibly about it. Even Marshall McLuhan can be opaque as well as lucid.

Considered in one way, communication is a good in itself; considered in another, it is a neutral power, capable of being used well or badly, for good or ill. This persistent ambivalence is bound to affect any consideration of communication as an integral aspect of what we need to know as human beings, what we need to learn as people, and what needs to be taught as part of a deliberate educational process. The following paragraphs briefly indicate some of the elements, samples, and examples in but one such treatment of the subject.

2. Some Norms and Objectives

Different societies and different individuals will vary the emphasis, but, as observed by an anthropologically-minded educator, the values attaching to communication could be listed in the most general terms;

Most of us wish to be effective and contented members of the species, to enjoy life to the full, and the ability to com-

municate influences these desires profoundly.

Effectiveness as an individual participant in life implies being able to communicate with others but also with oneself (in some cultures and for some persons, this would include the ability to pray, to meditate, as well as to commune with oneself in an illuminating or helpful way.

Some prefer a reclusive life, and degrees of gregariousness vary, but most people want and also need to be effective members of diverse groups and of society in general, contributing both to their own autonomy and to the collective ability to use communication as a sensitive instrument of control over circumstance, destiny, and the environment;

In our epoch, the boundaries and meaning of 'society' have become global and even cosmic, so that we need increasingly to be effective as world citizens;

We are nonetheless, at the biological and psychological level, isolated organisms, and we need to communicate in order to overcome, transcend, or even disguise this isolatedness;

Most people want to enjoy a sense of their own worth and dignity as individual, vulnerable human beings, and this desire relates not only to how they are treated and what is said about them, but also to the scope and standing of their opportunities for communication;

Communication also has to do with getting on as well as is possible with the maximum number of people, with enjoying good relations at home, at work, at leisure, or in the community, or even - since some of us relish antagonism - with efficient and pleasurable conflict;

The capacity to communicate affects profoundly our ability to manifest as fully as possible the defining characteristics of humanity, that is of a species that is uniquely metaphysical, ethical, technological and imaginative;

Of these defining characteristics, the biologically most fundamental is probably the exceptional dependence of the species on, and lifelong capacity for, learning.

Potentiality is, by definition, not the same as actuality. The lifelong capacity for learning may be blocked or frustrated,

or it may atrophy. Nonetheless, it is increasingly believed by psychologists and teachers of adults that the ability to communicate - strictly the several abilities involved in communication - can go on developing throughout a lifetime. We crudely distinguish being able to read and write from not being able to, but it is possible to spend a lifetime getting better at reading and writing, at speaking and listening. The painter, Grandma Moses, started late. Michelangelo was still learning when he made his last *Pietà* at the age of 80. People classified as unlettered have become articulate through video; people thought too old to learn have even established their presence in the community by running their own broadcasting service. There is no more fundamental or honourable educational role than strengthening the capacity of another human being to communicate. The expression 'mother tongue' is a reminder that it is not a role reserved for professionals.

Opportunities to communicate are as unevenly distributed as much else in life. Apart from inequalities due to differences of talent or ability, there are those caused by differences of education, role, or power. In most societies, men have louder voices than women and talk more in public. The Alumni of Oxford or Harvard and a handful of other such institutions know that their words shape the destiny of many other people, with whom a mutuality of communication is unlikely. Communication makes social cohesion possible, but it is itself channelled by, and is an expression of, the social structure.

What follows is a kind of educational check-list. Each item is obvious in itself, the aggregate providing a frame of reference for assessing whether our curricula and projects help or hinder the efforts of human beings to communicate well with each other throughout their lives. Such a list should provide norms by which educators may judge the adequacy of their curricula and by which students of all ages might know whether they are being well or poorly nourished in these respects, and whether and in what ways the educators themselves may need educating. What are the abilities which the learning society in general and education in particular should cultivate?

3. Abilities - a Select Check-list

Generally, the goal is for any individual to be articulate and expressive in a variety of media and to be critically responsive to messages in all media. I have chosen specific examples

of different kinds and of different orders of significance, but all pointing to recognisably desirable attributes. I assume that the cultivation of these attributes, skills, and abilities is the proper work of education. It must be stressed again that this responsibility does not confer upon educators any monopoly of skill or wisdom. People may spontaneously teach each other or learn from experience, without the interventions of teachers and apart from the auspices of educational institutions.

To be eloquent with the body: dancers, actors and singers know that the body is an instrument and a medium, and they consciously develop its expressiveness. The body is the basic medium of all, not only in itself, but also in that all media are themselves mediated through its senses. This is true for us all. We all need some of the abilities that are cultivated by performers - the dancer's awareness of space, the actor's skill with body language, the singer's understanding of breath and voice.

To be able, in particular, to use the voice: to project it enough, to convey nuance and attitude through tone, to use it for intelligibility and sonority, according to the situation.

To be capable of many kinds of speech: formal and informal, expressive and descriptive, firm and acquiescent.

To be able to speak well of different physical and emotional distances, intimately, fraternally, and publicly. It is important to be able to convey love, to discuss being hurt, to be honest in the small hours. It is important to be able to function well in a work group or on an entertainment committee. Not to be able to speak, or to speak out, in public is a kind of disfranchisement.

To be fluent in several idioms. It used to be thought, at least in England, that there was a correct way to speak. Schools were adjudged 'good' partly according to the skill with which they 'turned out' pupils capable of this 'approved' accent and idiom. Now the emphasis - brought about by an alliance of modern linguistics, sympathetic pedagogy, and popular television - is on intelligibility, which calls, in effect, for a range of idioms, modulating according to distance from home. This aptitude is closely related to the next.

To be comprehensible to a wide range of other people, and to understand people of many different backgrounds.

To have some command of foreign tongues.

To have understanding of other systems of communication (e.g. computer languages and mathematics) and notations (e.g. music).

To be able to listen attentively - hearing the meaning of the words, being observant and sensitive to the meaning behind the meaning - understanding and taking account of what interferes with communication. The pervasiveness of radio and, in many countries, of television, has encouraged in us a kind of inattentiveness. This is partly a biological resistance to being over-stimulated by too much 'information' and it is partly a mental set learned from the more recreational uses of broadcasting. We need the ability to listen or to view attentively as well as to overhear or endure a background.

To be able to read, at different speeds and at different depths, for meaning. There are many who 'learn to read' and then forget how to, because they have only learned the rudimentary mechanics of decoding.

To be able to write for personal, occupational, social and civic purposes.

To be able to read and evaluate mass media messages. In many countries, television is the chief source of information about what is going on in the world, but the awareness of the need to interpret this information is uncommon. As a pioneer of BBC current affairs television said many years ago, on the basis of her experience and anticipating much recent critical research, 'Television is not the truth: it is a point of view'. In other countries and with other media, the problems are not different (the press is partisan everywhere, for example). The grammar and the conventions of all media need to be understood.

To be able to take part in the communication possibilities of one's own epoch, in particular to have access to, and some competence in, the public communications technologies, of one's time. We need to know how to use a telephone, and to understand the similarities and differences between it and face-to-face communication. Access to print, to video, even to broadcasting (although the latter raises logistical, legal and other problems) needs to be as wide-spread as possible. It will increasingly become an asset to understand and use systems born from the marriage of communications and computers.

To know to react to public messages, positively or sceptically (as in the need to be critical of public rhetorics), to know what information one actually needs, which messages matter and whose.

At more proximate levels, to know how to get things done, for example in a committee - using words, memoranda, and body language to facilitate purposive and effective group work.

To be able to stand up for oneself, to advocate a cause, to argue a case without aggression. At different times, whole sectors of society may need to find a voice to establish their presence and worth, to offset oppression - industrial workers in the nineteenth century, older people in the developed countries today, immigrants and guest workers, women almost everywhere.

To be able to transmit and convey to others, interestingly and convincingly, one's own experience and wisdom.

To be able to think logically and to express oneself logically. This significant ability underlies many of the abilities already noted, or is incorporated into them. It also needs to be complemented by awareness of and skill in other modes of thinking, reasoning, deciding, and feeling.

Few people realise more than a limited amount of their potentialities, but this should not seem to imply that everyone can or should do everything. Alongside all these several abilities, each individual needs finally: to be capable of diagnosing his or her own situation and what it calls for in communication terms and of identifying those personal means of external media of communication which best suit the individual's own purposes, temperament, and aptitudes.

Not all communication is between persons or social. There are therefore two more talents to round off the list: To be able to communicate with oneself, in a private diary, or, according to one's beliefs, in prayer or meditation. To be able to be silent; and (rare and difficult) to be silent with another; and to have access to silence.

4. Implications for Curriculum Planners and Others

The check-list of abilities in the previous section has

certain obvious curricular implications. The main lineaments of an adequate educational response would include, for any individual:

To have recurrent opportunities to cultivate one's own body and mind as instruments of communication;

To have experience of different communication settings;

To have a variety of educative approaches to the realities of communication through role-playing, through the experience and analysis of real situations, or vicariously, e.g. through the study of literature;

To have training in technologically based forms of communication and education in the critical reception and use of technologically transmitted messages.

The importance and pervasiveness of communication can encourage fallacious overstatements about it; social cohesion is impossible without communication, but that does not imply that conflicts can always be *reduced* to matters of communication. Sometimes conflict, in an industrial setting, for example, can indeed be removed or reduced by efforts to get the parties to understand one another. Sometimes, however, the conflict stems not from misunderstanding but from an objective incompatibility of interest. Sometimes social cohesion, like effective diplomacy between nations, may actually depend upon concealing meaning, so that what is communicated is an overwhelming desire to live at peace, or to avoid anarchy and breakdown. Politicians have a bad reputation for damaging and abusing the language, but sometimes they fudge it in a good cause. The plays of Ibsen remind us that the same peril exists at personal levels. Within the family, or with friends, it is often best to 'hold one's tongue'. Yet at all levels it may sometimes be necessary, unavoidable, or purgative to create a new foundation for relationship, to 'clear the air' by communicating as clearly, candidly or vehemently as possible - for example, by giving an opponent credit for being tough and mature enough to take the unvarnished truth. These are lessons we all have to learn from each other, from literature and drama, and from education. At any time in the lifelong educational process, we can be helped to distinguish the place, role, and limits of communication in any given situation.

Generally, the social policy goal here is to create recurrent opportunities throughout life for learning structure by and

grounded in experience. This presumption of lifelong learning implies new forms of continuity or connection between school and adult education, and therein lies a familiar dilemma: school-teachers are asked simultaneously both to educate children and to be part of a mechanism for sifting and categorising them for various economic and social functions, and these objectives are notoriously incompatible. Animators and teachers of adults encounter some of the consequences of this contradiction within schools: Teachers are often insistent that there is, for some purposes, no substitute for the discipline of so-called 'written work', the value to the students consisting in describing what they believe, the help to the tutor in getting on terms with the minds of other human beings. Such tutors need to be aware of the conditioned alarm they may provoke. Research in Britain, analysing different kinds of writing for different purposes, shows that for many children learning to write does not mean learning to communicate, it means making yourself available for appraisal, even making yourself vulnerable - the chief purpose of writing in school and college being to facilitate assessment and control. Teachers often ask questions without having a genuine interest in the answers. Obviously, they frequently know the answers already, but the effect is that a dominant feature of pedagogy is profoundly bogus and, to a greater or lesser extent, known by all parties to be so.

Many adult educators would endorse the succinct formulations in Francis Bacon's essay, *Of Studies*. Bacon writes:

Some books are to be tasted, others to be swallowed, and some few to be chewed and digested: that is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention.

Many adults seem to have had little help in acting in terms of such wise distinctions and feel guilty if they do not scrupulously start at page one and plod on to the finish of a book. If an experience of books has meant 'set books', to be read so conscientiously that all the savour goes out of them, then people may be repelled by one of the chief instruments and achievements of human communication.

In the same essay, in one of the most celebrated sentences of English literature, Bacon compares three different kinds of communication:

Reading maketh a full man; conference a ready man; writing an exact man.

But if reading, conference, and writing are mainly experienced as exercises for being graded, then the chief justification for teaching them may be undermined and their lifelong significance missed.

More particularly, education in communication requires more than exercises. Sensitivity to response is of the essence of good communication, and this is not learned from red ticks and marginal comments in a school essay book. Exercises have their place. They may alert us to features of the real situation or train us in useful skills (e.g. detecting propagandist bias, training the voice, or acquiring the ability to summarize and paraphrase). But they must not dominate the regime.

On the other hand, schools do have unrivalled opportunities to do work which is truly preparatory in so far as the school is a real community within which authentic communication may take place. Such traditional devices as school magazines, plays and music for public performances and the posters made to promote them, pupils guiding parents about the campus on Open Day - all have their part to play, providing they are not just window-dressing. The hidden curriculum (the way the school is organised, and what it takes for granted, as distinct from what it explicitly teaches) can be at least as influential as the overt curriculum and so-called extra-curricular activities. Thus, in a school which attempts through its own procedures to be more a preparation for life in a democracy than for life in a hierarchically controlled factory, a child of eight can learn to stand up in public and put a reasoned case for getting the rules changed.

It is inevitable that a domain as pervasive and comprehensive in human affairs as communication should be the object of a large number of separate disciplines. In constructing curricula, syllabuses and programmes, it is and will often be necessary to synthesise for use what had been made distinct and separate for study and scholarship. Integrating separate aspects of the matter in this way has its risks. There could be many a college course called Communications Studies which, on examination, seems to be teaching people little more than the writing of reports and summaries. But philosophy, aesthetics, literature, semiotics, psychology, physiology, information theory, anthropology - all have their bearing.

A good example of integration is provided by the combination in Britain of language pedagogy and linguistics. In 1975 a major committee of enquiry into all aspects of the teaching of English in schools (the so-called Bullock Committee, after its Chairman, Sir Alan Bullock), commended the 'growing interest among teachers in the application of linguistics to English teaching', the essence of which 'lies in this concept of the inseparability of language and the human situation'.

This integrative approach would affect the study of language, communication, and communications. We need to be aware, for example, of continuities as well as of discontinuities between the study of inter-personal communication and the often rigidly separated study of mass media. In inter-personal situations we learn to listen not only to what is said to us but also to note who is saying it, in order to assess the authenticity, value, or attractiveness to us of the message. Do we trust the speakers? What is their motive for saying what they do say? In many ways, learning to read the media is almost indistinguishable from learning how to listen to the people we know or meet, and may be equally complex in either field: compare a drama using such naturalistic conventions that we wonder if what it says is 'true'), with storytellers in the same room who splice the interest of their anecdotes by claiming, quite falsely, that these events actually 'happened' to them.

The discontinuities may be equally important. The most obvious is that, except in specially devised situations such as a radio phone-in, the mass media are not, in one sense, instruments of communication at all - they provide one-way dissemination of messages. (In another sense, this is still communication in that listeners, viewers, and readers decode and respond to the messages even if not directly to the senders.) More subtle is the way in which the constraints on or of the medium (its technology, ownership, and control; aesthetic and other conventions) actually process the messages in more or less systematic ways. It is important to know whether the newspaper or broadcasting organisation is controlled by the state, by a public body at one remove, or by a commercial concern, and to understand what this may do to the way in which a page is laid out or a schedule planned.

We all need to understand about editing in media that are constrained by time and space. This may be achieved by comparing different accounts of the same event in different media. It is

achieved most vividly and painfully when people have the chance to produce their own community newspaper or video show. What material should be sought, what cut and excluded? This relates to the need to understand that all media messages are artefacts, even though there is a spectrum of relationships with reality which extends from the external broadcast of 'actuality' (i.e. the raw material of the actual event) at one end (football match, moon landing, and now, in the United States, televised murder trial) to the work of pure fantasy and fiction at the other, with news bulletins (truth, angled and orchestrated; facts turned into *objets trouvés, objets d'art*) somewhere in between.

As national and world citizens, we also need to understand how the mass media set agendas for public consideration, and even structure our perceptions of reality. Some time in the 1660s, one of Blaise Pascal's *Pensées* anticipated what Althusser and others call 'the reality of the illusion':

If we were to dream the same thing every night, it would affect us as much as the objects we see every day. And if a workman were sure to dream for 12 hours every night that he was a king, I believe he would be almost as happy as a king, dreaming for 12 hours every night that he was a workman.

(*Pensées*, Section VI, number 386)

Thus we need, for example, to know where and how messages are generated if we are to appreciate how the distorted images arise that the developed countries and the Third World have of each other, or to understand the amount of time given in some countries to, say, sport in a television schedule compared with other kinds of programmes, or even the way in which individual football players are lionised during a football match.

5. Conclusion

Communication is important to society and to human beings as a species. The ability to communicate is a matter of deep concern to us as individuals. We become particularly aware of its significance at moments calling for maximum expressiveness, and of its value when confronted with handicap or deprivation in ourselves or others: a man brought up in a taciturn culture needing to convey grief or love; someone plagued by tinnitus; an old woman with advanced Parkinson's disease, able to hear but

not able to speak; any of us in a foreign land where even the script is alien; millions of adults, even in developed countries, unable to read simple signs and messages in their own languages; a young man or woman, trained to write a good application for a job, but failing to speak coherently or persuasively at the interview; many of us, lacking courage or the knowledge to sing a song or play a musical instrument for the delight of others; many of us again, incapable of decoding the increasingly central languages and notations of mathematics, excluded to that extent from our own cultures. Communication is, then, a very general concept that comprises not only the ancient land of what used to be called Rhetoric, and that more recent terrain, the uses of language, but also the most modern field, technologically based media of communication (so-called communications, in the plural). It is at once primeval and most amazingly sophisticated.

As we approach the bicentenary of his birth, it is worth recalling the Danish prophet Grundtvig who, obsessed as he was with the Living Word, connected metaphysical conviction and education, through singing and the celebration of the mother tongue, in such a way that the Danes were enabled to recover their pride (after their defeat by Prussia) and discover an authentic non-aggressive, economically successful and politically tolerant national identity.

These interconnections led Grundtvig to write numerous national hymns, forming the basic repertoire for a popular music from which emerged the towering symphonies of Carl Nielson. They also led him to conceive the Folk High School, which, with its stress on the Living Word as distinct from inert scholarship, became the chief medium for the 'enlivenment' of the people.

In conclusion: One chief task of education for people of any age is to help the individual to find his or her true voice, or the group to which the individual belongs (locally or worldwide), or even, as with Grundtvig, a whole nation.

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Chapter 4

The Education of Corporal Man

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In attempting to deal with the theme of the body from the standpoint of "lifelong education", there arises first of all a terminological and conceptual problem. One might speak of "corporal education" or "education with, through or by means of the body". Should one hesitate to use such expressions, recourse could be had to such fashionable terms as "education of the psychomotor system" or "through the psychomotor system" or simply "the motor system". Alternatively, one might fall back on the traditional terms such as "physical education" or "education by movement". Each of these terms reflects a particular conception of corporal education, which in turn is the result of an educational system, and, at bottom, a philosophy of man. But this conceptual issue will not be taken up now. It will be left pending in order to tackle directly the substantial issue: what is the significance of the body from the standpoint of the educational philosophy implied by the concept of "lifelong education"? The conclusion which the following considerations attempt to establish is this: *Corporal man* is a basic element in the educational task in general. (1) The education of such a corporal man is very different from the task as it is usually understood and taught in accordance with the customary practice of physical education in the 20th century.

1, Education in Depth

1.1 Body and movement

The expression "corporal man" is undoubtedly a tautological one and is intended to remind us that man, with his intellectual, volitional, emotional and other faculties, is a corporal reality. This corporality is not a separate and isolated

agency or entity; it conditions everything else: thinking, willing, feeling. Man is bodily in his very thought, volition, and emotion. But perhaps we should for the moment steer clear of the substantive, "body", in order to avoid the slightest trace of the old anthropological dualism which has had such a significant influence on the history of education and which the life-long education movement has undertaken to bring to an end.

Corporal man is a phenomenon that cannot be ignored in any re-thinking of education. A few brief anthropological reflections written not long ago and recently published (Cagigal, 1979) may serve as a point of departure:

"The individual becomes acquainted with the world around him through his bodily existence. The brain ... structures its basic life-patterns by means of sensory experiences. The famous axiom, *nihil est in intellectu quod prius non fuerit in sensu* (there is nothing in the mind that was not previously in the senses), once again suggests itself as one of the major principles of any anthropological manipulation - for this is what all education is, no matter how liberal and open-minded it may be in intention.

Any initial contact with the world is sensory or perceptual - that is *corporal* or *physical*. From the very beginning of life, therefore, attention must be paid primarily to the corporal existence. In fact, the elementary truth of life itself must needs prevail: when the child is born, the first education he receives is above all corporal and physical. The obstetrician acts, helps the child to emerge, manipulates him; postnatal care is lavished on him. This painstaking attention given to the newborn child from the very outset also involves an affective, and, we might even say, a rudimentary intellectual transfer: the child's brain structures its basic behaviour patterns in accordance with the satisfactions or dissatisfactions, conflicts or enriching stimuli which are transmitted to it from the first moments of its extra-uterine existence by corporal experience.

However, the primacy of the body is not limited to the early stages of life. Man continues to live

throughout his existence not only *in* his body, but also *with* it, and, in a sense, *from* it and *through* it. Here we have patent evidence of this definitive human abode.

Man *is* a body, and, at the same time, he *has* a body. The body *is*, among other things, something that *is* used. But it *is* more than something that *can* be used. It *is* not just part of man, but man himself, although precisely because of the body's capacity for objectification and setting itself at a distance through consciousness, man *is not* just a body, but *is* something more than a body."

It is in this perspective of corporality as the substantive part of man that the following reflections are to be seen.

Movement is another basic anthropological phenomenon to be taken into account in regarding corporal man from an educational standpoint. The whole of life is movement, a fact that molecular biology shows to be true of its most basic elements. But man needs to move not only at microsomatic levels, but at macrosomatic ones as well. One of the primary pleasure principles in babies is the exercising of this capacity and need for movement. The movement of the newborn child is immature, lacks rhythm, is disproportionate in tone (according to biomechanics) and cannot express itself properly. Yet during this early vegetative-impulse period, the child has a great need for these locomotory discharges. Thanks to the combination of these possibilities of movement with progressive sensory-perceptual improvements, he gradually learns to feel, to differentiate and identify himself somatically; thereby he learns to be in space. The exploration of space is one of the great human adventures from earliest childhood. First by gesticulating with his arms and legs, then raising his head, twisting about his longitudinal axis, lifting his torso, crawling, and taking his first steps, the child gradually discovers, through experience, his situation in space, which is the basic form - a corporal one - of *being-in-the-world*. Without a learning process prior to this necessary adventure, man would succumb. The disposition of one's own body and the progressively acquired referential notions of other bodies and of spatial dimensions are necessary for life. Without an accurate knowledge and experience of such realities, man becomes an abnormal being, if not succumbing entirely. Man is a "corporal being in space". His capacity for and exercise of movement teach him the great lesson of this basic anthropological reality.

It is on the inherence and inescapable presence of the *body* in man's life, not as a part of man but as man himself, and on the anthropo-dynamic reality of physical *movement*, that physical or corporal education should be based. It will be shown later how far this is true of the foundations of education in general.

Fortunately, the body has been rediscovered in contemporary culture, and many pedagogical reforms have been initiated on the basis of this re-discovery. But if formerly the educative value of the body was generally ignored, now it is obscured by the glorification of the body for any number of purposes, e.g. commercial sex, spectator sports, and promotional exploitation of physical prowess. In place of the old repression of the body, with all the concomitant pedagogical failings, there is now a consumer boom of the body, which must be stemmed by means of a new education based on the humanistic revaluation of the body. As Bernard rightly says:

"The civilisation which hitherto was based on a rejection of the body seems now to give the body pride of place ... The silent melody of the instincts that Freud used to speak of seems to have changed into the tumultuous clamour of unleashed instincts ... The body which seemed unable to become a cultural value is now a *fetish-value*."
(Bernard, 1972)

We are presently witnessing two major forms of liberation of the body: eroticism, changed by consumer forces into pornographic exploitation, and sport, which, having emerged as a result of a humanistic revaluation of the body, makes the champion into a dehumanised, super-specialised robot, likewise exploited by the predominant forces. Such, it seems, is the extreme fate of our ground of being-in-the world, this at once glorious and painful part of ourselves which we call our body.

What educational potential is there to be found in all this?

1.2 School and life

Although I wish to avoid general remarks about education and concentrate on the specific subject of corporal education, some consideration of the general issue of education is neces-

sary. Education consists in systematically helping the individual achieve the best possible development of personal abilities and adaptation to the environment.

In primitive societies, educational activity takes place naturally. Practically all members are educators. It is not necessary to have any specialised institutions or persons for the task of education. The child is educated spontaneously by living in his society. Since there is practically no diversification or specialisation of labour, everybody does a little of everything, and the child learns to live as he progressively plays a greater role in society. Everyone hunts, builds huts, defends himself, and makes implements. Both the gradual identification with this common task of the adults and the general stimulus to become fitted to carry on the struggle for existence are the motivational ingredients of the individual ready to be educated and learn to live.

In developed, complex societies, the educational phenomenon is much more complicated. The diversification of functions, specialisation, and the variety of work and achievement have multiplied the forms of existence and, consequently, the life-models available to the child. Nowadays it is possible to become many different things in life. In ancient times one could become a warrior, a craftsman, a shepherd, or a woodcutter. In the societies which became great, among the specialised activities which sprang up from sheer necessity was that of taking charge of educating the children. Originally this was done by the old people, who, because of their equanimity, were born advisers. Later it proved necessary to train people for this task. The profession of educator was born and the school emerged.

The increasing complexity of society has, in turn, led to a greater number of different kinds of school. Each of these different kinds of school has then diversified according to the views of life, the beliefs, and the socio-political factors of the respective society. Therefore, to the concept of school as a preparation for life must be added the concept of school as an introduction to a particular professional task. The latter aspect is progressively overshadowing the former in industrial societies.

Moreover, as a result of the compartmentalisation in industrial societies and the ensuing social ghettos, the school has itself become a ghetto, shut off more and more from the rest of society. The school - in its widest sense, from nursery

school to university and higher technical education - reacts more readily to its own problems than to the demands of the rest of society. Teachers are a society within society in general, replete with their disputatious associations (and resentful of the lack of understanding from the rest of society), with their immanent objectives, and with their autarchy. Hence many educational models are more the stereotyped products of school inertia than a response to real social needs. It is symptomatic that school authorities have adopted the somewhat megalomaniacal position of dividing up the whole of life into two sectors: "school" and "outside school". Two ways in which schools turn away from the deepest requirements of life can be singled out. The first is the adulteration of the primary aims of the educative function caused by losing sight of the great purpose of learning-how-to-live for the sake of partial goals of immediate performance, which may be manipulated by the political or economic system of the moment. The second is the self-sufficiency of schools.

The motto of the Faure Report, "Learning to be" (Faure, 1972), adopted a few years ago by UNESCO, constitutes major proof of the blind alley in which school systems, generally speaking, had long found themselves. It is almost inconceivable that UNESCO - and this shows its educative sensibility - should have to remind the world of educators that their chief mission, their main task, is to see that their pupils "learn to be." This illustrates what has happened to the educators of the last quarter of the 20th century.

1.3 Education is not temporary living

What is the direct relevance of all this to the corporal education which now concerns us?

The issue has a much more direct bearing on the education of corporal man than might be supposed on the basis of what has been said so far. But let us advance progressively.

Agreement is fairly widespread that the systems of education in the developed societies have failed to a greater or lesser extent. It is those with the leading role in education, the educators, who recognise this.

After the lamentations come the attempts to put things right. There have been many of them in the history of education,

some of them extremely fruitful; but, generally speaking, they have not been sufficient to make a generalised remedy possible. From the humanists to the eminent figure of Rousseau and the great pedagogical schools of the 19th and 20th centuries, there has been no lack of ideas and important aids to cling to. In all of them more or less distinct central themes may be found: ideas such as respect for freedom, personal initiative, independence from social stereotypes and, above all, attention to nature and its spontaneous demands, could serve as the basis of the rethinking of education.

The last theme, the return to nature, would seem to be the most objective attitude for any new system of action with man. The sciences of human knowledge, from genetics and neuro-biology to psychology, sociology, and philosophy, bombard us with heterogeneous new facts. When these have been correlated, they may throw more light on education.

One such illuminating and coherent view, which may be derived from the interpretations of depth psychology and the findings of developmental psychology as well as from the results of experimental psychology and pedagogy, is a different assessment of the child as regards the disposition of the adult, the world in general, and, above all, as regards himself. Given the nature and extent of this essay, it is not possible to go into details concerning each of the different schools. But these facts are generally known to anyone with a reasonable knowledge of contemporary psychology or just a general culture, and certainly to any educator.

The basic idea is that, contrary to the long-standing pedagogical view of the child as fundamentally a potential adult, the child is above all a present reality, fully justified in itself. The more seriously the child is taken at each stage of his development, the greater the chance of success for the future adult.

The child is not a block of marble, a statue in the mind of the sculptor that will only exist as a statue when the work is completed. The child in the mind of the educator - whose influence on the child is never comparable to the absolute mastery of the artist over his work - is no doubt a future person whose development is viewed in the light of some definite model of human ideality, but the child is chiefly the present child, who must live his present life as fully as possible and perform actions justifiable for their own sake. The sculptor chisels the

marble, which, as a work of art, is nothing at all until it is finished; until that moment, everything is provisional, everything can be prolonged or subordinated to a glorious end. The educator, as he shapes the child, touches a material that is already sacred, as important as the end result, but now much more delicate. This is the drama of the educator: he must work with forbidden material, and cannot refuse to do so. The solution does not lie in a facile abandonment of all action, as suggested by some current pedagogical thinking, but in the humble attitude of constant readiness to rectify the mistakes that invariably are made, as is reflected in the traditional metaphorical terminology of modelling and forming. The educator must recognise that his function is no more than that of an assistant or a source of encouragement, though a very highly qualified one; but he has an astonishing commitment he cannot relinquish, far superior to that of the most dictatorial goldsmith.

Of all animals, the human being is the one which is born in the most unfinished state: it is totally inviable. The fact and duty of education are due to this inviability and this helplessness. This helplessness accompanies the human being practically to the end of his developmental period. He is in need of educational action until that time at least. It will be seen in the following in what way the philosophy of lifelong education shows a certain kind of need persisting throughout the whole of life.

The work of education is incumbent on whoever is close to the child: first its parents, then the family, and finally society in general. In developed societies, as was pointed out previously, this educative task has been delegated to professional groups of educators and consequently to their specific institutions. For very complex historical reasons (which range from philosophical views to urgent demands from a society impatient for results, efficiency, and quantifiable knowledge), school education - that is, virtually all institutionalised education - has become preponderately abstract and verbal and lays great emphasis on the accumulation of information and on learning by rote. Serious consequences have flowed from this: a lack of concern for and understanding of the way in which the child experiences his school activity, of the enriching of his relationships, the acquiring of lasting habits and attitudes for life out of school; and above all, ignorance of creative attitudes in subjects other than stereotyped school life. The emphasis was placed on quantified schooling, with stereotyped graded programmes, assessments of results, specific fields of knowl-

edge. The student who failed to obtain good results was neglected; his attitude, his enjoyment, his devotion to the task were only valued in a marginal way.

When a child studies a list of the rivers in Asia or medieval kings or learns how to carry out an algebraic operation, he is undoubtedly performing an action the positive outcome of which - retention of the list or learning the operation - may provide him with a certain enjoyment: an external kind, that of acknowledgement on the part of the teacher, and a more intimate kind, that of having achieved a successful performance. This kind of result, although positive, involves the personality only in a very partial way. The motivations which underlie his action are merely peripheral: personal satisfaction with a result, and a purely conventional external gratification - the usefulness of knowing something for the future, or getting a good mark in the examinations. Such behaviour, even in the best case of a child well integrated into school dynamics, is only peripherally motivated. It is almost purely rational, and the great experiential store of personal interests, gratifying emotions, intimate and elementary enjoyment, and personal expression does not come into play at all. The results are certainly self-contained, without any retroactive effects at all.

In prevailing school behaviour there is a provisional element; the action is not justified in itself but has only a relative value which an honest appraisal would show to be useful for the pupils' later life only in a very small percentage of cases, particularly in view of the enormous acceleration in technological and social change.

When a child draws, however, what he has learned may or may not be useful for him in the future, but he is performing an action that is fully justified for its own sake. Provided that not too much academic rigour is required of him, the child will experience his behaviour fully and express himself authentically. There is no need to motivate him from the outside; he already displays a motivated behaviour. And in this full realisation and enjoyment of the act lies the guarantee of its usefulness for the future - usefulness which is to be found not in what he has formally learned about drawing, but rather in the way he has lived through his drawing, expressed himself, achieved his aim, overcome or tried to overcome limitations, lived, suffered, and enjoyed. The educator was there to offer support, understanding, and a human response, i.e. to encourage indirectly the child's new desires for self-expression.

The same thing happens when a child sings or handles objects or plays at pretending to be such and such an animal or character, and, above all, when a child expresses himself by moving his body.

The pleasure which the child experiences at the age of four months, when he moves his arms and legs and tries to twist his trunk in his crib (a scientifically demonstrated pleasure but obvious at an experiential level to any observer), or at the age of two when he runs from one end of the room to another, or at the age of seven competes with a friend to see who will be first to reach a goal post or to knock the other down - all this shows us a range of natural corporal behaviour patterns not sufficiently well known to an excessively stereotyped physical and sports education, but one which allows natural educative action of unsuspected potential.

The overriding concern to make the child into a good future adult has channelled educational systems towards a mere accumulation of contents and ability to handle such contents. Alongside this so-called intellectual education, there has been a concern for moral education (customs, values, social manners) and for character training concentrating mainly on willpower, decision-making, and self-improvement. In other words, institutionalised education has concerned itself basically with the cortical part of the personality, leaving the deeper layers in the intuitive hands of the family and the social environment. Fortunately, these intuitive agencies have not done such a bad job, and so western civilization endures, despite its ailments. However, it is a pity that precisely the institutionalised part of education fails to pay careful attention to such fundamental aspects of the person. A review of the present school curricula in most countries shows that school education continues, in spite of solemn declarations of principle, to be one of contents rather than a concern to train the person qualitatively. There is a preoccupation with a future that cares more for having than being, for producing than accepting, for knowing than understanding, and for remembering than thinking.

This means that pedagogical science has fallen behind psychology. This is not strange, for the sciences of pure knowledge are less impeded in their progress than the practical sciences, which have a more direct effect on the social structure and hence clashes with it.

The kind of education aiming at a strong, dominant adulthood, has (apart from other social consequences) produced ambitious men, eager for success, dissatisfied and frustrated. Such men, as a result, need to distract themselves with goods or stultifying information. The successful man of our civilization, who possesses more wealth, more knowledge, and more sources of information than ever before, does not know how to live with himself; he knows nothing of personal tranquillity and lacks a personal identity. Such an adult did not learn as a child to feed on its own personal reality.

This dehumanisation has been noticed chiefly by critical educators, sociologists, and even political leaders. Slogans such as the "quality of life", "learning to be", "ecological nature", "the fight against pollution", etc., are highly reassuring. Now it is for all to seek precise formulas in each area for re-humanising man and society.

In the field of education - no doubt the most important, for as Wordsworth said, "the child is father of the man" - significant movements have sprung up. One of the most significant is precisely that of "lifelong education", sponsored by the highest authorities of UNESCO. Whilst trying to avoid merely reiterating the meaning of this movement, which has already been set forth in more general expositions on the subject, it is nevertheless important for our purposes to stress some of its basic ideas according to such noted authors as Cropley (1978), Dave (1973), and Lengrand (1970).

The first notable aspect of the movement concerns its *vertical* conception of education, i.e. from the earliest moments of a person's existence until death; and its *horizontal* conception, which strives to coordinate the agencies which influence the life of the individual, e.g. family, playground, peer groups, clubs, audio-visual reception, society in general. "This horizontal integration means above all," says Cropley (1978) "that the knowledge gained outside school is not to be considered separate from that gained inside school."

This vertical-horizontal integration of lifelong education could be encouraged in two main ways: either by a new organisation of society or by special preparation of the individual from early childhood, so that his basic learning might be open-ended and create receptive attitudes, causing him to regard his own life and that of others as a permanent interrelation.

Action is necessary on both fronts, and the promoters of the movement concern themselves with both. The first, the new organisation of society, is very difficult and almost utopian. Not only would different schools be required, but also families with new views on education, radically reformed municipalities, communications media in the hands of such educators, and similarly enlightened public authorities. It is understandable that hopes of obtaining something positive are seen in a long-term perspective. But work proceeds without discouragement or loss of faith.

The second mode of action concerns the educator more directly. Definite advances are being made here. It is more than a mere sense of restlessness; it is a complete educational movement which has developed, among other things, a new language: the education of "attitudes", the "internalisation and personalisation" of experiences, "self-regulation", "learning not to stop learning", and seeing that "these learning systems are consistent with the requirements of nature". It presupposes a new attitude towards education; practical formulas are keenly sought, and, if possible, some basic educative pattern, comprehensive, polyvalent, and capable of enriching the personality. We have no use for the return to primitive societal models in which education is a natural process of social integration. There have been nostalgic experiments, which have generally failed. We do not educate a child to live in a primitive society but in a society which encompasses a large number of cultures, despite industrialisation, consumption, science, specialisation, and cybernetics. Even in such a complicated society man should be self-sufficient and live a fully human life. For this task fundamental educational conceptions are needed.

1.4 Personality, body, and world

In the field of what could be designated as *corporal education* (or education of corporal man) it may be possible to find a basic and yet multivalent behaviour pattern without detriment to naturalness.

There is a fashionable movement today whose success, already commercialised by a number of astute professionals of education, may lead it to fade prematurely away. It is associated with the expressions "psychomotricity" or "psychomotor education". If this movement is able to abide by the moderation

and rigour of its own findings and is not spoiled by a desire to hold the centre of the stage and gain a facile success, it may be destined to render a great service to education and its reform. One of its most significant authors, Vayer, makes the shrewd observation that maladjusted persons always have difficulties such as defective perception, insufficient control over their body, and difficulties in keeping their balance when standing. Their maladjustments do not depend on these disorders, but such problems always come together.

This illustrates the profound connection between the ego-world relation and the self-relation of the ego. Being-in-the-world coincides with the corporal ego. The corporal person is the spatio-temporal dimension of the ego.

Educational action takes shape fundamentally by helping to create a proper dynamic synthesis between genetic capacities and the additions (by assimilation and adaptation) which come from the environment. This is an open-ended process in which progressively more complex structures appear. The genetic programming that enables the individual to acquire such structures only bears fruit by means of a suitable meeting and synthesis of the agencies of the environment, physical, biological, and (especially) human and social. Man is genetically programmed to be able to find himself; to do so, he must have a large number of contacts. If these take place in the proper way, the process of maturing also proceeds satisfactorily, more or less as it was programmed.

Thus the sensory-perceptual capacities, which need, if they are to mature, sufficient biochemical conditions to begin with, also need a minimum exchange with the environment, an exchange which does not take place without personal action. It is an active dynamic synthesis. The concepts of "maturation" and "learning", which fifteen years ago were sharply distinguished, nowadays admit of no clear boundaries. Without sufficient time, there is no maturation, but without the necessary active exchange (assimilation-adaptation) the results of the planned maturation fail to appear.

Man, that singular member of the animal kingdom able to perceive, reflect, and form a concept of himself, is dependent for his development on three basic agencies, three cosmic-vital centres: the ego, the world of other people, and the reality of things.

If communication between these three agencies is not sufficiently developed, proper genetic and personal maturation do not take place. Man comes into the world eager for communication and constitutionally in need of it. Such communication is achieved through the "corporal schema".

This term has been increasingly used in the last twenty years, although it has not always been properly understood. We shall therefore try to clarify it.

The term "corporal schema" introduced by the French doctor Bonnier in his book *Le Vertige*, designates the perceptual model of the body, a self-configuration in space together with a vague feeling of existence close to kinaesthesia. This phenomenon is being actively considered by psychomotor specialists as fundamental to educative action. Indeed, all communication with the three nuclear realities takes place through the body; communication is corporal, or corporalised. Hence the entire programmed structural enrichment of the person is conditioned by, and depends on, corporal communication or "corporalisations".

Furthermore, the functions that gradually appear in the individual person do not arise spontaneously as a result of a simple process of temporal maturation; they are the product, on the basis of genetic maturation capacities, of *action*, of the active synthesis of these capacities with a multiplicity of personal, cosmological, and social elements; they are the result of an active intercommunication, an interrelation or series of interrelations. However, the one basic communicative entity, the *sine qua non* of all personal progress, is the body, the corporal person. This entity must be the primary educative object.

All communication with the world is corporal. To begin with sensory-perceptual processes, it has now been demonstrated that their development depends to a large extent on well integrated corporal activity. "It would be an error to imagine," asserts Luria (1973) "that sensation and perception are purely passive processes. It has been shown that sensation includes motor components and, in modern psychology, sensation and particularly perception are considered as active processes incorporating both afferent and efferent components."

Even for the successful acquisition of language, that communicative process of the highest order, corporal activity is a fundamental ingredient. The emergence of language is not an isolated event, but rather the result of an activity in which

corporal tonicity plays an essential part. "Language", says Ajuriaguerra (1962), "forms part of the perceptual world and also of the world of manipulation and action."

In Piaget's structuralist theory, it becomes quite clear how thought itself is the result of a series of adaptative actions in whose origin motor (i.e. corporal) activity plays a decisive role. "All cognitive mechanisms," he claims, "are based on motricity." Only in the later stages of the development of abstract thought (after the age of thirteen) can one speak of "decorporalised" (i.e. logical-mathematical) thought. All the previous stages of thought not only have a sensory component, but are also partly physical movement, active, representational or schematic. Action continues necessarily to play a part in its development (Piaget, 1955; 1963; 1968 a & b; 1970).

The influence of corporal activity on the emotional life takes place at the deepest levels of behaviour. Since the emergence of psychoanalysis it is no longer possible to ignore the central significance of the body in the life of pleasure and especially as an original life force. For Freud (1970), the "psychic apparatus" develops out of the original somatic reality. "The content of the *id*" he says, "is everything that is inherited, the congenitally given, the constitutionally established; that is, first and foremost, the instincts arising from the somatic organisation, which here find a first psychic expression, the strength of which we are unaware ... The instincts (Freud refers here basically to just one, the libido) represent somatic demands made of the psychic life, and are the ultimate cause of all activity, although their nature is conservative."

Whether or not one is in agreement with this anthropology, since Freud the paramount importance of the corporal life with its imperious demands cannot be ignored, nor can the exacting price that must be paid for neglecting it. And with respect to any pedagogical action, the body is crucial not only because of the necessity of recognising the pleasure principle (the main inspiration of the pedagogical schools of liberation of Neill, Freire, Holt, et al.) but also because of another great Freudian principle - incomprehensibly evaded by brilliant contemporary educators - the principle of adaptation to reality; herein is the constitution of the ego properly rooted.

Indeed, Freud says that the *ego* is a special organisation resulting from a transformation provoked by the encounter with the reality of the outside world. "It operates as a mediator between the *id* and the outside world. ... Its task is self-

assertion, by avoiding excessively intense stimuli, and adapting moderate ones ... Inwardly, against the id, it achieves mastery over the demands of the instincts" (Freud, 1970)

It is by means of this active-adaptatory capacity that this second of the three agencies which form the mental apparatus (i.e. id, ego and superego) is formed. The ego is the present, acting reality of the person, that which defines and identifies him at any given moment; and it is the product of a dynamic synthesis of original genetic drives on the one hand (the id), and on the other, of adaptatory, constructive, and integrating actions which ultimately make up (with the somewhat superstructural inclusion of the superego) the present and permanent reality of each individual person.

From being scorned and repressed as an inferior part of the person (e.g. instrument, object, support, source of passions, disruptive element) by a repressive, ingenuous pedagogy, the body has emerged to find itself the object of an almost fetish-like cult with a sacred taboo against thwarting its appetites from sexual drives to aggression.

Repression of the bodily drives was discovered to be a source of personal disequilibrium. Accordingly, many educators nowadays favour the free play of the corporal appetites as the guarantee of personal equilibrium and a definitively balanced education.

The swing of the pendulum has brought us from a cult of *angelical innocence* - which thought it could ignore that unrelenting constituent of the personality which is the body - to a *utopia* which, in Freudian terms, would consist of singling out the id, gross corporality, as the main personal reality, to the neglect of the other major constitutive force of the person, the capacity and need for adaptation to the threefold reality of life: "oneself" (the ego as a result of adaptation), the world of other people, and the reality of things.

No matter how they may be valued, the two major aspects that must be taken into consideration when looking at corporality from an educational point of view are the following: firstly, the corporal schema, conceived as a system that is open to the outside world, fitted for adaptation to it and for gradual incorporation into the ego; and secondly, the crucial libidinal significance of the corporal person (and consequently the qualitative importance of all personal relationships, e.g. affec-

tion, sexual drive). The two aspects are part of a single reality; the body is both things at once. Personal enrichment by means of the opening of the body to the world is always coloured to some degree and in some form by its libidinal quality.

¹ In an analytical study, it is convenient to consider the two aspects separately, although they never do appear or act separately and independently of each other.

2. Motor Education

In establishing a system of educational practice on the basis of an evaluation of corporal reality, we should take note of two basic characteristics: the *retroactive* capacity of the learning-maturation complex and the self-regulating faculty of the brain.

The notion of retroaction is explained by Vayer (1978) in the following terms: "For the action undertaken to have an effect on the different levels of organisation of the nervous system and to be integrated into it, the subject must actively seek information from the world around him. It is the confrontation between existing information (recorded in the course of previous quests for information) and new information proceeding from the environment which permits at once the development of present action and the acquisition, through this action, of new information, which crystallises in new experience and new knowledge. Now, if the action is to be actively undertaken, it is necessary that the decision process should be that of the subject, i.e. that the action should be intentional."

These capacities for the self-programming, self-directing, and self-regulating of one's own action are possible thanks to the levels of dynamic organisation of the nervous system.

In his book *Working Brain*, Luria (1973) distinguishes "three principal functional units of the brain" whose participation is necessary for any kind of mental activity.

The first functional unit carries out the "energy and tonic controls of the cortex, the regulation of tone or wakefulness ... The systems of this first functional unit in turn experience the differentiating influence of the cortex, and work in close relation with the higher levels of the cortex... It plays an important role in tonicity and regulation of the state of cortical activity and the level of alertness."

The second functional unit carries out the "reception, analysis, and storing of information. It constitutes a processing system for information from the exterior ... Its chief biological structure responsible - isolated neurones - obey the 'all or nothing law', receiving impulses and sending them on to other groups of neurones."

The third functional unit "plans and programmes" behaviour. "It regulates behaviour so that it conforms to the plans and programmes. It thus constitutes the highest level of the functional organisation of the brain, programming and regulating all activity."

"It would be a mistake," Luria points out, "to imagine that each of these units can carry out a certain type of completely independent activity ... Every form of conscious activity is always a complex *functional system* and is carried out through the *combined work of the three cerebral units*, each of which makes its own contribution." As an example of this, we may take the paragraph quoted earlier. "It would be a mistake to imagine that sensation and perception are purely passive processes. It has been shown that sensation includes motor components and, in modern psychology, sensation and more particularly perception are considered as *active processes* which incorporate both afferent and efferent components ... The *active* character of the process of perceiving complex objects is even more obvious." These three levels, which are merely functional and do not coincide altogether with precise anatomical locations differentiate themselves by acting on received information.

An immediate conclusion of enormous educational importance is that, for a real enrichment of the subject to take place, experience and information must become as "personalised" as possible; for this to happen, they must be fully intentional and involve the three levels of cerebral functioning. In other words, for the subject-world, subject-society, and subject-ego relations to favour the development of the person, the child must *act* and acquire information and experience intentionally and actively. Only such action is fully lived and produces the enriching effects of retroaction.

There is an immense gap between the way behaviour is to be adopted for a proper enrichment of the personality and the school model according to which the intention of the learning process is contributed by the adult.

2.1 A basic learning process: corporalisation

The more elements from the environment that are incorporated into this feedback process, the more possibilities there are of learning. The more active the child is, the better his chances of assimilating enriching information.

In terms of the corporal schema, greater activity does not mean simply more movement; it means more intentionally directed self-regulated movement, with the three levels of cerebral organisation participating harmoniously.

A large amount of physical movement that does not involve all mental levels and is not taken up by the higher personality in a total, self-regulating and dynamic way, is as one-sided and unrewarding as learning by rote in childhood. This kind of mechanical physical activity (most of traditional physical and sports education) is concerned only with stereotyped performance and skills. It is useful for strengthening certain neuromuscular and organic abilities, but it is of very little use as an educational system. It is not really an educational system at all. Nor is rote learning; it is incapable of generating any enthusiasm, for no initiative or comprehension is required of the child; consequently it is unable to fully develop the self-regulating feedback system that would result from fully intentional action.

This is the kind of education that still predominates in our western culture. Certain conditions have been changed in the school, new subjects have been introduced into the curricula in order to stimulate the creativity and originality of the children, but the old patterns persist; the changes have been merely quantitative. The systems for selecting educators are still based on the quantification of knowledge and on the accumulation of compartmentalised culture, along the lines of a kind of mini-erudition which will later - although this is theoretically denied - be transmitted to the children.

The attempt to find a type of educational behaviour rooted in the child's natural desire to learn leads us to the idea of a corporal education based on the following conception of the body:

- the entity whereby the child begins the process of self-discovery, self-reflection, self-understanding, and self-regulation.

- the primary and permanent relation with the cosmos; the individual's spatial and temporal existence in the world; the means whereby he achieves dealings with and control over the world.
- the qualitative, libidinal relation with other people.

But all this potential for the proper development of the person on the basis of the body is only realised through action. The body acts by moving. Consequently, body and movement lie at the basis of all communication with oneself and with the rest of reality. They are at the root of all learning and all education.

2.2 Studies and experiments

The significance of physical education (e.g. motricity, sports) in the development of various personal abilities is not a new concern. Even though a fundamental re-thinking of education on the basis of attention to the body has not really been attempted prior to this study, for several decades there has been profound interest in the influence of physical activity on the improvement of various personal abilities. There is in existence a large body of experiments and research concerning not only the direct benefit of motor activity for the various motor skills (with very positive, though foreseeable results), but also the benefit for other, personal values.

Although it would be useful here to give a detailed list of the present state of such research, this would mean going beyond the scope of the present study. Suffice it to mention some of the areas where the most progress has been made:

- Correlation between physical activity and sensory-perceptual abilities (Balow, Barsch, Berges, Cratty, Delacato, Evans, Fretz, Frostig, Gallahue, Kephart, Lezine, Lipton, Moody, O'Connor, Ridini, Singer, Trussell - to mention only the North American researchers, who have made the most advances);
- Correlation between physical activity and standard classroom skills, viz. reading, writing, arithmetic (Asher, Cratty, Gerhart, Humphrey, Ison, Link, Picado, Prager, Thomas, Werner, et.al);

- Correlation between physical sports activity and the control or retardation of aggression. (There is a wide range of research in this area.)
- Correlation between physical activity and anxiety.
- Importance of physical activity in increasing the precision of the "auto-concept" and the image of the body.

Noteworthy results have already been obtained in these and similar investigations. Generally speaking, it has been found that motor activity favours the development of the individual and the social person. But these studies have been carried out on the basis of motor behaviour within the ambit of more or less traditional physical education. The most common aim has been to determine the extent to which compulsory physical education programmes should be included in school curricula. But in general these are physical education programmes which have not yet undergone the radical transformation of accepting movement as it is outlined by the psychomotor specialists.

But studies are also beginning to be done on the basis of experiments of greater pedagogical significance. In an attempt to assess from the earliest age (one year) the overall effects of a methodical stimulation of kinetic activity on other aspects of the personality, including the intellect, an inter-disciplinary investigation (with teachers of physical education, psychologists, doctors, social workers, etc participating) was launched in Mexico in 1977 under the auspices of the Department of Physical Education and the direction of Professor Strafford. There have been no results as yet; it even seems as though the research has changed into a direct programme of comprehensive educational action. Nevertheless, it is an ambitious venture which deserves to be imitated and to have its methods refined.

It has already been twenty years since Diem (1966) courageously undertook a study of the systematic motor stimulation of newborn babies. At the International Congress of Physical Education held in Madrid in 1966, he presented the suggestive paper "Sport during the First Year of Life". His original system of study (which was not wholly classifiable within established methodologies) and his perseverance have been responsible for some remarkable achievements. "Movement" concludes Diem "is one of the child's basic experiences". As he walks, he perceives new spaces, new connections, and new problems. The learning of move-

ment goes far beyond the mere acquisition of motor habits, for it also causes emotional and cognitive experiences, that is, experiences which stimulate the intelligence. Through his capacity for movement, the child develops his faculty of observation, his creativity, and his capacity for co-ordination." These results, which have been experienced and tested, constitute by themselves a subject for serious educational concern.

The studies on physical education programmes in special education deserve mention. This is an older issue than the previous ones and is more developed, theoretically and practically, in almost every country. A bibliographical list alone would be extremely long. In almost every area of behaviour, notable progress has been made in physical education programmes for sub-normal and for handicapped persons of all kinds. Generally speaking, the school or method employed does not matter. The results are almost all satisfactory.

In her introductory address to a physical education session of the Committee of Experts on the Continuity of Physical Education in Schools and the Practice of Sport by Adults held by UNESCO in Washington in October 1977, Professor Vodola, commissioned by the AAHPER to develop for the whole of the United States a programme of physical activities for handicapped children, said the following: "For these children - for the handicapped - physical education is not just a very important subject: it is their main education" (Vodola, 1977). We might wonder how far this statement may be true of all human beings, since all of us suffer from considerable psychological and social handicaps.

But, leaving aside suggestive extrapolations, the very fact of the enormous re-educative power of motor ability for all these handicapped persons brings us back to the centre of our concerns. The handicapped individual and, to an even greater extent, the retarded person are beings with a greater remnant of childhood factors. The success of psychomotoricity in their education shows us once again the importance of such behaviour in the early stages of life.

In this brief review of research on the possible influence of motricity on other areas of behaviour, an especially significant topic has been left to the end. It will be treated in the following section.

2.3 Psychomotricity and intellectual development

Research on this subject has increased enormously in the last ten years. Given the imprecision and range of the term "intellectual development" or "intellectual behaviour", research has tended to concentrate on particular operational areas.

Experiments have been performed regarding the possible influence of motor activity on memory, which since Bloom has been accepted as one of the basic intellectual operations. Positive results in short-term memory retention have been obtained by McCormick, Schnobrich, Cratty, and Villard; and in long-term retention of a semantic content, by Cratty, Martin, and Szepespanik. More complicated but less suggestive are the studies on the influence of motor activity on mental skills which involve *discrimination*, *categorisation* or similar operations of classification. Cratty has also investigated this point, with no particular significant results so far. Concerning the evaluation processes, which both Bloom in his *Taxonomy* (1956) and Guildford (1960) in his *Structure of the Intellect* place on the highest cognitive level, attempts have been made to find out what possible operational improvement can be obtained with special kinetic activity programmes. Mosston (1972) and Cratty (1970, 1974, 1975) have worked on this problem without conclusive results as yet, owing to its complexity.

New topics are defined according to intellectual functions. Practically every level and form of intellectual activity and thought are considered from the standpoint of their possible connections with motor activity.

Perhaps the most important studies, at least those with the greatest effect on our subject, are those of Piaget and his school. Scattered throughout his works are a number of principles and findings which constitute a genuine theory about the decisive influence of motricity on intelligence and thought. "It is on the basis of motricity," he asserts, "that the structures that will produce the higher forms of thought are progressively worked out by successive reorganisation." Piaget accords primacy to action: "The subject constitutes himself by means of his action on objects and other people." For Piaget (1963) motor behaviour lies at the root of all intellectual development, even of purely thinking intelligence: "The structures which characterise thought are rooted in action and sensory-motor mechanisms deeper than the linguistic phenomenon."

In this theory of operational structures, he defines what he means by operation, which "is not reduced to a figure or an image; it is above all an action, a coordination of actions within an overall structure which possesses the laws of the whole." For Piaget, this action which constructs the progressive structures is, at the beginning of life, almost entirely motricity. The significance of motricity gradually declines. It plays a less important role between the ages of eight and twelve; and from the age of twelve, when the child enters the period of "formal intelligence", it plays a decidedly secondary part. It never loses its validity entirely, however: "Psychomotor intelligence is neither a stage to be passed through nor a state to be achieved. It is a state of continual becoming and is never completed" (Cagigal, 1979).

Both in developmental psychology and in the study of intelligence, Piaget is universally respected by educators, psychologists, and professionals who study behaviour in general. Professional educators have not realised that the importance Piaget attaches to psychomotricity for the development of the personality implies the need for a radical transformation of educational practice.

But undoubtedly - and we must insist on this - if questions are raised at this level, the first task is to revolutionise the current concepts of physical education; the present argument does not aim at having the educators simply replaced by others. In a recently published essay (Cagigal, 1979), the author took the liberty of writing the following: "Great progress towards a genuine and deep general education would be achieved by replacing without further ado the Teacher Training Colleges or University Schools of General Basic Education with institutions for training physical education teachers, provided that such training was properly interpreted. But this is an exciting and, I admit, controversial subject (although the controversy would vanish if ignorance were dispelled) which should be dealt with separately on another occasion." This is not the 'other occasion'. Nor is it to be thought that it is sufficient simply to replace the *present* teacher training colleges for elementary education with the *present* training institutes for physical education teachers. This would be absurd, for in the present institutes or schools where teachers of physical education are trained in the various countries, the kind of training offered - in spite of the enormous disparity among them - is very different from what a corporal educator could be if trained on the basis of the principles expounded here.

2.4 Temporality and bodily decline

One view on corporal education that is seldom held is that which takes into consideration the existential fact of ageing and illness. Our body is a source of pains, ailments, and decline. Our bodily nature changes. The self is the personal support for successive different bodies, groups of cells and tissues which are totally renewed every 6 or 8 years. In between these cycles, the physical appearance and the very constitution change. In early life, the body grows, increases, becomes stronger and more skilful; then it holds its own, more or less; and finally it declines and loses skill and energy. In old age the body is more of a burden than a source of energy.

A thoroughgoing existential-corporal education should face up to this unavoidable reality. This is a subject which certain philosophies of education have tackled in different epochs, and upon which religions have meditated. But dualist interpretations have contributed (more so in the philosophies of the West than in those of the East) not to an active acceptance of bodily transience, but to the above mentioned contempt for or withdrawal from the body.

One of the profound philosophical limitations of modern schools of psychomotoricity is that they take the corporal person at the time of its most splendid flourishing as their ultimate horizon. And yet once this person has gone through a period of youthful plenitude and early maturity, his body starts declining implacably. In physical activity programmes for old people there is a mistaken insistence on such things as "gymnastics for maintaining one's health." Bodily activity with a view to old age and to what has to be done in old age should not be designed to keep a body fit, but to adapt the person to a new and diminished bodily situation. It involves a different kind of corporal education.

The psychomotor schools need a deeper philosophy of man in order to incorporate with full existential acceptance this universal fact of ageing.

Lifelong education, i.e. education enabling one to live in plenitude with oneself and others throughout one's life, cannot be geared simply to the period of peak performance; it must also be directed at a satisfying and fruitful life in old age, even very old age, such as almost everybody desires to attain, a richness of personal existence which will in its turn

make social dialogue more fruitful. The figure of the balanced and optimistic old person as an element of social integration and enrichment has been proverbial in some cultures. The education prevailing in our time looks exclusively to the chronological period of the flourishing of the human being, from youth to early maturity; it is unfair to childhood, where it educates on the basis of the adult pattern, and to old age, which it treats as imbecile. A corporal education not striving to produce champions could help set right the values of education.

3. Conclusion

Two fundamental ideas have been set forth in this paper. The first refers to the role of motricity or psychomotricity (which is practically the same thing) in the general educative task based on the real needs of the child and bringing about integrated and coherent behaviour. The second concerns the profound reorganisation that such an approach would require of what is understood today as physical education.

Both general education with psychomotor orientation, and psychomotricity (conceived as a pleasurable, motivating, self-sufficient, and actively enriching total reality of the person) must and can, because of their common substance, be fully incorporated into the concept of lifelong education. Precisely these conceptions of education and psychomotricity, synthesised in the expression "corporal education", point the way for the development of individuals who are open-minded and always educable.

What the particular contents should be, i.e. the skills to be taught and the exercises for achieving them, is a matter which falls outside the scope of this theoretical consideration. Furthermore, when education is considered to consist in basic attitudes and the corporal relations of the person with himself and with the world, it may even be questioned whether the traditional concern for particular skills and specific exercises should be retained.

The fundamental task is to set a number of broad aims and concrete objectives. These should include: the acquisition of physiological capacity; psychophysical integration with good personal equilibrium; paying attention to a personally experienced knowledge of the body; the acquisition of basic patterns

of movement; the elaboration of the individual's own corporal schema; the enjoyment of physical exercise etc.; adaptation to the physical environment, taking notice of the acquisition of a correct spatial schema; integration into the social world, paying attention to the acquisition of corporal behaviour patterns suitable for intercommunication. In the pursuit of these aims and objectives, the most natural forms of movement and the most normal socio-cultural habits should be sought. There are hundreds of different corporal tasks which can lead to personal enrichment. The main factor in achieving this is for every individual to adopt his own behaviour, with total involvement of his person. Only in this way can he be enriched all along the line from execution factors to motor intelligence, and have the firmest guarantees of sound learning through enjoyment and felt, expressed, and communicated experience.

This corporal education should not resemble the strong sports movement that is still growing throughout the world. It has little to do with the more or less official public sports engaged in by the sports associations. But neither is it the same as the spontaneous expressions of popular sport, e.g. jogging, bicycle riding, and mass marathons. These movements have a deep sociological significance as a practical and healthy reaction against the official sports establishment with its championships, records, spectacles, and propagandistic displays. Popular sports indicate a kind of return to the primary function of sport as a recreational physical activity, which has been betrayed in our time by the excessive solemnity of organised sport.

But it is a popular phenomenon and is very different from what may be understood as education by movement, as basic corporal education. Even if the sports movement (and natural competition and play behaviour, which are the essence of sport) could be incorporated into basic corporal education, socially structured sport would nevertheless go far beyond the mere kinetic patterns of spontaneous human relationship suitable for corporal education.

There are many things that could be done in this whole task, but for the sake of convenience they may be concentrated into three main ones:

The first and most general task is social action: publications; courses; seminars for critical educators and dedicated physical education teachers; other courses of action that will disseminate the basic ideas; and well thought-out slogans.

The second task is pedagogical experimentation. At the previously mentioned "meeting of experts on the continuity of school physical education and the practice of sport by adults" convened by UNESCO in Washington in 1977, the following recommendation was passed: "To study conditions for the setting up of experimental primary schools in which the curriculum and the educative process would be structured round education by movement." This is one of the most promising practical initiatives. Given the social environment and predominant attitudes and stereotypes, it is certainly no easy task to establish this kind of institution. But it is an important practical path to follow. From the standpoint of lifelong education, these suggestions are equally valid for any kind of experimental institution outside the school.

The third task is a convergent transformation of the professionals of physical education and the professionals of general education by means of introducing the requisite systems of training and selection into their respective curricula.

None of these tasks is an easy one. But it cannot be expected to be a simple task to move from a society in which man aspires to dominate and know everything, to a society in which man aspires to be a lifelong learner.

NOTES

- (1) This expression, stated in such a simple way, is undoubtedly a tautology. But I think it is worthwhile putting up with this defect for the sake of the expressive eloquence it possesses and the profound anthropological sense to which it lays claim in the philosophy of education.

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Chapter 5

Time and Lifelong Education

G. Pineau

The relations between lifelong education and time are so close that they develop in many, not necessarily convergent directions. They may even be conflictual, as is illustrated by the dangers of perpetual schooling (Verne and Dauber, 1977), the diffident attempts at re-arranging social times, and the vital, often losing, battles fought by each member of society to be the author of his own history in time and counter-time. Time is a limited resource necessary both to the development of the trading society ("time is money") and to that of every social agent, be it an individual or a group. "Time is the space of human development" (Marx, 1965, p.107). Thus the appropriation of this precious resource is a central stake in the social and individual struggles for life, survival, and development. The lifelong education movement carries educational practices and theories into these struggles. In what sense?

1. Time and Counter-time

1.1 The counter-time

It is not intended here to dwell upon the dangers involved in a colonisation of the times that are still "free" by the powers that be in industrialised societies for the purpose of instituting *their* lifelong education. Not that these dangers are illusory. On the contrary, the Paris Communards recognized them long ago when they destroyed the clocks, which they regarded as symbolic instruments of their alienation, their imprisonment within rigid, repetitious, timetables. In our age, the wrist-watch is to Westerners what the collar is to the dog: the instrument of domestication. And the Westerners are trying to impose this instrument on the non-Westerners in order to tie

them to fixed hours, to encase their temporality, which is considered unproductive because it is different. Thus the dangers of the mechanical colonisation of the world have never been as real as they are now. The institutionalisation of lifelong education could become the pedagogical-ideological instrument for the global expansion of these conditions of production. That is the reason why there is an urgent need to go beyond earlier criticism (Pineau, 1977, pp.288-295) to counterattack, and to attempt to develop countermeasures.

The various social attempts at rearranging the times for work and the times for leisure in order to eliminate deadening routine can provide certain objective conditions for the development of these countermeasures (see, in particular, de Chalendard, 1974). But, necessary and helpful as these rearrangements may be, they will not be sufficient unless they are accompanied by an active, combative attitude of all members of society towards time. Time is a difficult area of learning, basic to a lifelong education that will be educative and not alienating. In this paper some aspects of active learning about time will be developed as a foundation of lifelong education.

1.2 The struggle against cronos and the chronometer: a hopeless battle?

Before embarking on this difficult area of learning, it is necessary to do away with the conditioning at school which has reduced the learning of time to the discipline of history - in the direction of democratisation: history can also be the history of the peasant, the worker, the people. This democratisation can make history less remote, less foreign. But familiarity with the past, sometimes mainly with folklore, is not enough. The individual must feel at home in the present, his present, in order to build the future, his future. "Life can only be understood by a return to the past, but it can only be lived by going forward" (Kierkegaard, 1935-1969).

However, most of people's experiences of everyday times are experiences of powerlessness - from the daily race against the clock to the obstacle race over the different life stages, only to arrive at the finish overtaken by events. The accumulation of such experiences leaves a bitter taste from which each person draws his own frustrating lessons. For nostalgic people, the "good" time belongs to the past. The search for this lost time takes them away from the present and still more from the

future. The "instantaneists" cross off the past and the future and try to live in the present, seeing each moment as something unique, while the eschatologists work for the future - the grand revolution or the golden age - and sacrifice the present generations. These temporal refuges enclose everybody in a mutilated time which stunts him. Failure to live the dynamic time resulting from the dialectic interaction of the present, past and future is one - if not *the* fundamental - form of alienation and reification.

Unfortunately, it is the predominant form. The struggle against cronos and against its modern incarnation, the clock, seems far too unequal, and therefore hopeless. Nothing will arrest the course of history; nothing will completely bridge the gulf between generations; the life curve is a real curve, and the employment of time is dictated by the schedules of commercial relations rather than by the social rhythms of individual development.

1.3 The specific revolutionary project of lifelong education

Is, then, the learning of time nothing but a learning of its necessity, its fatality, at best a learning of how to arrange it to make it more bearable? Current experience seems to indicate that this is so. But the utopia, the myth of lifelong education denies it. The specific and revolutionary objective of this utopia, this myth, is to break the vicious circle, to change the course of history, to bridge the gulf between generations, to redesign the age scale, to devise a way of using time that is educative all day, every day, and that leaves no room for alienation. The specific and revolutionary objective of lifelong learning is to substitute lifelong creative time for destructive time.

This revolutionary socio-educational project is not merely a secularisation of religious mysticism which does not dare to show its real face. It rests on more concrete, material foundations. The development of the theories of relativity (which show in physical terms that time is not a given fact but a construct and hence exists, or can exist, in infinity) seems to provide the physical basis that renders this quasi-mystical project materially more plausible. "The notion of time, and above all that of irreversibility, are today the central points of a great current of thought ... which seems to integrate in a coherent image of nature the contributions of thermodynamics, of the theory of information, of cybernetics and biology" (de Rosnay, 1975, p.201)

lutionise human and social time by rendering it permanently educative, may be seen as the educational dimension of this current of thought. Following the liberation from geocentrism and anthropocentrism, efforts are being made to achieve liberation from a unidimensional and unidirectional "chronocentrism, which renders behaviours and conceptualisations homogeneous and irreversible" (de Rosnay, 1975, pp. 201-237). The consideration and pursuit of the specific objective of lifelong education thus appear to be a major concern of current scientific research as well as of centuries-old, fundamental human and social aspirations.

1.4 The pedagogy of discontinuity

Heraclitus's view of man's lifespan is an example of the destruction-construction of a person's time which we have in mind when talking of time as an area of learning basic to a liberating lifelong education.

One of the central temporal contrasts at the core of life-long education is the contrast "between physical time, a kind of reference frame independent of events and phenomena, and psychological time rich in the diversity of life" (de Rosnay, 1975, p. 201). In this vivid poetic dialectic, Heraclitus expresses this view of life: "Life is a child that fathers, that plays. The child shall be king." (1). To him the life-time allotted to each person is not the homogeneous and chronological time between two births: that of a son and a grandson. Though the physiological time remains, it is not the exclusive frame of reference for the construction of his time.

"Basically", said Bachelard, to pave the way for a pedagogy of discontinuity, "what has to be explained is not the continuity of life but the discontinuity of birth" (Bachelard, 1932, p.67). And to free the individual from the fetters of what he calls horizontal time, he advocates three kinds of experience:

1. Learning not to link one's time with the time of others - breaking down the social frames
2. learning not to link one's time with the time of things - breaking down the phenomenal frames of time;

3. learning not to link one's time with life - a hard task - breaking down the life frames of time.

"Only then will man attain the autosynchronous frame of reference ... Suddenly all flat horizontality disappears. Time no longer flows. It erupts." (Bachelard, 1932, p. 106)

This eruption of one's own time will result from a positive learning of time liberated from the different and foreign times of others, a learning based on temporal experience consisting of at least two events. The first event is a rupture, an incident, a disappointment, an established temporal discontinuity; departure, arrival, death, birth, separation, divorce punctuate our life history. These events constitute the necessary material basis of our personal temporal experience, our history. But it is a fragmentary basis unless these events are integrated in a symbolic appropriation which creates a unified history. History exists only in the telling. Though it cannot be reduced to a tale, it does not exist without one. Hence the importance for everybody to be able to tell his life story in order to exist personally and to integrate and understand what is happening and coming to life. The duration and the difficulty of this symbolic appropriation of events in order to create a unity out of discontinuity are proportionate to the discontinuity involved: the greater this is, the longer and more difficult is the achievement of unity, but the more personal and rich it becomes. Without history that is told there is no historical existence; but too many histories stand in the way of a historical existence or extinguish it.

To make one's time erupt, to construct one's history, means to work on discontinuities and events, provoking them, enduring them, but also integrating them. These discontinuities and events represent segments of time that take varying lengths of time to appropriate. That is why a distinction must be made between temporal learning from *experiences of long duration*: a stage of life (childhood, adolescence, etc.), the entire lifetime; one's own or that of another generation, or even that of a civilisation; and other kinds of learning from *experiences of short duration*: an accident, an encounter, which compress an enormous amount of experience into a few seconds; but also other short temporal units, occurring day-by-day or repetitively, such as day and night, or 24 hours, a week, a month, a year.

1.5 Gaining one's life without losing it

The kinds of learning relating to calendar units (a day, a week, etc.) have not received much attention. In fact, does such learning exist? Is it not purely a mechanical use of time determined by others? A dehumanisation and progressive conditioning for a homogeneous temporality devoid of qualitative differences, where all events take on a monotonous greyness in the mechanical succession of days, nights, weeks, months and years? These everyday times are the times that favour alienation; free times are rare among them. The liberation of these times seems, therefore, to be a prerequisite for the utopian objective of lifelong education, i.e. the revolutionising of time.

It will be a difficult liberation, for it is the everyday life that has to be liberated, day by day. Everyday life is the swamp in which the adult gets bogged down and revolutions perish. It is the place of elementary and repetitive relations to things, to oneself, and to others - the relations that are most difficult to control and to change. It is the touchstone of all revolutionary plans: either they succeed in transforming every-one's daily life into a place of appropriation and production, or they fail and construct superstructures that make use of everyday routine under the cover of grand ideologies.

If lifelong education is to attain its objective of revolutionising time, it will have to revolutionise everyday time. There is no magic recipe for this. One precondition is: "To dwell uncritically in time first, and then to keep it at a critical distance" (Lefebvre, 1968, p.142).

In order to bring about this cultural revolution, it is therefore necessary to turn the daily routine into a place of lifelong education. On the basis of the limited experience of dead time, let us try to see what can come out of it.

2. Night-time

2.1 An experience of dead time / accented time

This night in the Alps had no stars, but it had me. It had gradually, without noise or blaze, darkening and muting one by one my steps, my sight, my voice. And with a kind of secret attraction, I had let it fall. I had let darkness dissolve the accustomed shapes and landmarks - let it dissolve myself, change

me into a nocturnal unknown. This was the hour. No need to look for other lights. It was the end of the day. At the age of 25, this was rather early.

And then I saw nothing any more. It was night, when the things and words of the day disappear. Even when their inadequacy, their senselessness has been experienced, they remain nevertheless the familiar attributes of the day. Their disappearance, their evasion, gave me an additional equilibrium that led me - I don't know where. The night - the dead of night - is the least socialised environment, the least illuminated by a collective squared pattern of time and space that programmes for everybody the nature and sequence of his activities, the things to do, the words to say. Between the words and things of the day and the complete darkness of the night there is the world of artificial, subdued light, when people sit in a chair in an air-conditioned hall or on a bench in a smoke-filled room, depending on class. But I did not feel like fleeing from the dark, going inside and sitting down. The dark is part of everyday life. And I could not go to sleep; anguish was tearing at my throat and keeping my eyes open. Mistrust those who keep awake at night, said Nietzsche, a man who cannot have enjoyed easy sleep:

"Oh man, watch out!
What does deep midnight say?" (Nietzsche, 1975, p.369).

What was he saying? In particular, about the relationship between time and lifelong education?

2.2 The informal nocturnal "residuum"

Approaching the relationship between time and lifelong education by way of this unusual experience of dead time - accentuated time, means approaching it via a temporal residuum, the residuum of the dominant educational practices and theories in Western countries. Yet this residuum is very concrete, it occupies one half of the day, the week, the year, and one half of the lifespan. This temporal residuum, recurring perpetually every day is, quite prosaically, the night. It is so repetitive and so regular that it is forgotten, unnoticed, wiped out. The night, which brings sleep, dreams, pleasure, desires, love and crimes, does not feature in the dominant educational theories; it is not even relegated to the eclectic category of informal education. These theories are so school - and discipline - oriented that the dark is left out. It is the blackboard on which one writes but which one forgets. The writing obliterates it. It is as if the

night did not exist. The result is a mutilation of educational discourse which takes the drama out of life and education and renders them childish. No wonder that those whose interest such discourse is supposed to arouse remain unmotivated.

Let us approach this residuum in the belief that it provides the counterpart of day-time education. This counterpart may be as stunting and alienating as its opposite if it is illusorily kept separate and lived as if it were a free, private, and autonomous time. The night reproduces the relations of production through reconstituting the working capacity: sleeping, eating, relaxing. But it is a counterpart that introduces a dialectic into the formative process undergone whenever one *produces* and when one's products (encounters, resolutions, dreams, plans) do not vanish in the morning but confront the constraints of the day. The night opens up a space/time for the educational process to emerge and develop a counterpart to the powers that be during the day-time. This educational counterpart, which is chiefly nourished by the night, is self-development.

2.3 No romanticism

This is not romantic idealism. The night does not automatically promote the emergence and development of self-education, i.e. the mastery of man's power to develop himself. Sometimes it is so compressed and suppressed by the day-time relations of domination that it is reduced to simple reproduction. The night is then a shroud covering sleepers who are doubly dead: "dead during the day in stultifying work, dead during the night in re-building their working capacities" (Cauquelin, 1977, p.11). The night workers are likewise victims of the day-time logic of production: coloured cleaners, servants of the affluent and fast-asleep whites; night-watchmen, watchdogs for the means of production; nightshift workers, chained to the vicious cycle of the clock. Even the impression that the world of night-time entertainment enjoys liberty is nothing but illusion; the apparent excesses of night life are marked out, manipulated and exploited by the entertainment industries and mafias that organise "crazy" nights.

Far from automatically engendering a personal control of one's time, which could be transferred to the day-time, these nocturnal practices are symptomatic of an even more complete alienation: night-time, like all other times, evades the stultified day workers, night workers, and the professionals of the night.

Night-time should not, therefore, be idealised as an autonomous time, nor should leisure time be idealised as free time. Firstly, night-time, like leisure time, depends on the working hours determined by the individual's socio-professional position. "The relation to time of the dominated differs radically from that of the dominating ... it is a relation of possession for the one group, a relation of privation for the other" (Bisseret, 1974, p.150). Secondly, autonomy, like liberty, is not a fact provided by some space or social time, but a construct, a never-finished product of a lifelong process of liberation and autonomous development.

Thus there should be no illusion. But no disillusion either. The following remarks may serve as an attempt at a realistic approach to the night with a view to discovering its implications for lifelong education.

2.4 Some observations

- 1) While the different social times are not autonomous, the degree of their dependence varies. They have "relative autonomy", subject to specific possibilities and impossibilities.
- 2) Night-times, whatever their diurnal repressions and compressions (the extremes of which have just been shown) have a hard cosmic and biological core. The alternation of day and night constitutes the basic natural rhythm for the inhabitants of this world. This cosmic rhythm is at the same time the most internal and the most external because it has been biologically internalised in accordance with the cyclic rhythm (roughly one day). "The body temperature, urinary elimination, the metabolic constants, the heart beat, arterial tension and many psychological functions follow the cosmic rhythm" (Richelle, 1971, p.25).
- 3) Social, psychological, and symbolic relations are, in principle, built around the rhythm of day and night. Dominantly and almost unconsciously these two poles structure social and individual life as well as "culture". The latter, i.e. the entirety of symbolic instruments at our disposal, is largely structured by

these two poles, which magnetise a whole range of apparently disparate elements and, by placing them into a magnetic field, give them a direction. The day is the positive pole - life; it gives a positive charge to the elements associated with it: sight (the prototype of intellectual knowledge), the external, the high, the male, the spirit. The night is the negative pole - death; to its field belong matter, the female, the low, the internal, and the subjective, global, experiential knowledge acquired through direct manual or corporal contact. This bipolarisation is so pronounced that all culture may be interpreted as a struggle, a dialectic between day and night (Durand, 1969). Likewise, the path of man's development is stretched between two poles which structure him biologically, socially, and culturally.

- 4) Since Plato Western culture has evolved under the influence of the diurnal element. It has been predominantly visual, objective, intellectually detached, male, received from on high, from others, external and elitist. The theories and practices of an education "preparing for life" are the product as well as the producer and reproducer of this culture of "enlightenment". But the development of this diurnal culture has impeded the development of the nocturnal element, with the result that experiential, concrete, feminine, self-created, internal, and convivial culture has remained underdeveloped.
- 5) Two modern inventions have provided the technical instruments for extending this hegemony of the day, to the profit of economic and political interests:
 - the clock, a machine that orders and counts time by dividing it into equal homogeneous units: 12 hours for the day, 12 hours for the night. The qualitative differences are erased and the natural temporal rhythm is destroyed in favour of a mechanical temporality inscribed on a clock (Mumford, 1934).

-electricity, providing artificial light, tends to push back the frontiers of the night (McLuhan, 1968). The media linked to it have been justly called machines to obliterate time.

6) Our hypothesis is that the barely emergent movement of lifelong education, an education coextensive with life, cannot fulfil its function of liberation unless it develops what has been underdeveloped by day-time education. The entire nocturnal element, the "residuum", has to be liberated: on the one hand, the direct and concrete relations of man with himself as a body, sexed and assigned to a definite social, political, and historical place; and, on the other, the direct and concrete relations with things. It is not by chance that, alongside the lifelong education movement, new social movements are emerging - women's liberation, ecology, self-administration, and liberation movements in the Third World. To the outsider, the link between these movements is not evident at first glance, but it is deeply felt by those directly involved.

7) The liberation of the entire nocturnal element can only come out by its own efforts; it must be a self-liberation. The nocturnal element is the best place and time for the emergence and development of autonomous individuality. Just as the day is the realm of an education received from others, the nocturnal realm is that of self-development.

3. The Nocturnal Element and Self-Development

3.1 A negative approach

This unusual approach will be based, in the first place, on the gaps created by the literal disappearance of day-time education.

1) *Disappearance of Professional Educators and Relaxation of the Hierarchical and Functional Relations of Day-time Dependence*

This disappearance and this relaxation are not total; the relations are merely softened. But at dusk a socially and professionally less programmed space/time begins. The social being may find himself alone, and he has a greater margin of freedom to decide what to do. A rough indication of this social relaxation is provided by agendas; most of them do not include the night-hours. The squares start about 8 a.m. and end around 5, 7 or 9 p.m. The night is not divided up in a standard and homogeneous fashion.

The night-time has a dual movement, or as Bachelard says, "two great tides, one carrying us to the middle of the night and the other taking us back to the clarity and activity of the day" (Bachelard, 1970, p.197). The first movement is one of social ebb, a relaxation of social relations, and takes us to the middle of the night, the centre of diminished concentration, where the social being dissolves. Does the end of this social being bring an end to all activities? Or does it mark the beginning of intense activity in which the principal actor is this internal and unknown self? Dream functions without a psychoanalyst, and awakeness without a supervisor. The end of being hemmed in by others thus initiates intensely personal, formative activities.

2) *Disappearance of Objects and Subjects of Education*

At best, educationists would place these solitary nocturnal activities into the residual category of informal or non-formal education. This assignment to a category negatively defined in terms of formalised institutional education comes close to reality, perhaps even the specific reality of self-education.

Indeed, the forms of day-time education do fade away and disappear at night. They are broken up, transformed, even shattered; no more books, no more content, no more distinct objects, not even a well defined subject. "The dream at night disperses our being over phantom beings of ourselves" (Bachelard, 1971, p.124). And for those whom distress keeps awake and prevents from dreaming, this awakeness is the vital, almost organic battle against the carving up, the panic, the fusion and confusion that result from the disintegration of what had previously constituted them. In this "ante-subjective state" (to quote Bachelard again, to our knowledge one of the very few to have

delved so deeply into this state, resided in it and come back and decoded it) the self tries to find, to articulate, to produce a form. This effort at self-development thus seems to be a formative activity in the sense of giving oneself a form by putting together scattered elements.

3) *Appearance of a Troubling Residuum*

The disappearance of professional educationists and traditional educational objects from nocturnal activities reveals more clearly a new agent (the "autos"), activated by the drive to give itself a form and not dissolve in chaos. Is this activity residual, of no importance to the educational process, defined exclusively by its day-time institutions? Or is it fundamental implying the need for a radical re-definition of education? If lifelong education means anything, the answer cannot be in doubt: the integration of the "residuum" necessitates a radical re-definition of the educational process. Before attempting such re-definition, let us approach this residuum in a more concrete manner.

3.2 A more concrete approach

This nocturnal residuum is lived differently according to age, sex, social class, urban or country residence. "When I was a child, the night was for me the world of the adults", a friend told me. In fact to a child, being awake at night means entering the world of adults. This virtual identification of the night with adulthood may partly explain why educational thought centred on the child has taken so little interest in informal night-time education, which is almost exclusively an adult domain. Awareness of our ignorance concerning the various forms of self-development at night-time according to age, sex, social class, and environment is a first element of knowledge that should not be rashly disregarded. Assessing our ignorance is the first and indispensable step in every kind of research.

To take this step, we will attempt to analyse the night-time on the basis of its dual movement, from the ebbing of day-time to deep midnight, and from midnight to the dawn of another day. The specific type of learning possible in each of the periods will be indicated. This will be the first glimpse of a zone to be explored. Light and night are always partial.

1) *Dusk, a breach between two worlds* (Castañeda, 1974, p.278)

Nightfall is never as abrupt as the fall of a curtain in a theatre. There is always a transitional stage of longer or shorter duration in which the light fades. Electricity, superseding fire, prolongs this intermediate stage, this time and place for specific activities which set the rhythm of daily existence. Is dusk also an intermediate stage between the day and night realms of education, between hetero-education and self-development?

2) *From 5 to 7 p.m., a space/time of transition*

Dusk, the hours from 5 to 7 p.m., is a space/time of transition between the end of the working day and arriving at home. The use made of these prosaic, elementary activities of working, travelling, and living at home determines whether they will be educative or permanently alienating. For most people, the time of transition is transportation time, an irremediable lost time in which paradoxically, the means of transport immobilises in order to transport better. But can't this time be utilised for self-development? "The choice of a mode of travelling is *ipso facto* a choice of a type of human relationship, of a way of living together. At the centre of debate lies the fact, marked by technocratic solutions, that effective mobility, the mobility that allows people to meet, results from the synergy of an autonomous mode of travelling (moving by transit) and a heteronomous mode (being transported)" (Dupuy and Robert, 1976, p.162). In the extreme, the overdevelopment of the heteronomous mode of transport paralyses not only the autonomous mode but all mobility. In Western societies the proliferation of automobiles, which entails an almost absolute dependence on this means of transport, comes close to creating a general paralysis. (2)

Hence the use to be made of travel time raises a basic policy issue of balancing the autonomous with the heteronomous mode of transport. It is a complex, long-term issue, but this should not stand in the way of using one's own initiative to rectify the situation. Travel time can always be utilised for self-development. For many people, the automobile is a favourite place for thinking. "Alone at the wheel, I rethink, recall, order, analyse, synthesise, finalise, compose, organise, renew, improve, plan and memorise; my ideas, my decisions, my plans, my escape paths emerge and take shape in this detested mechanical and noisy machine which is abhorred during the holidays." (3)

Public transportation offers the same and other opportunities, e.g. reading, handiwork, unforeseen encounters. For some autodidactics, public transport represents the central space/time for their education. "For 40 years I have read in subways, trains and buses, at the rate of 20 hours per week. It is there that I have done my most serious reading, reserving lighter literature for the home. These 20,000 hours are equivalent to at least 5 years at college. And I have had them in what would otherwise have been lost time, time over which I had no control. The metro university is one of the best in the world" (Hirschberg, 1960).

What is it that renders these times of transport-traveling so propitious for self-development? Our hypothesis is that they represent a situation determined both by *physical proximity and by the social distances of the travelling individuals*. The roads of communication are the only really social spaces/times that bring together individuals who are elsewhere separated by social cleavages. It is an entirely external mass-produced get-together, as Sartre would say (4).

This situation provides specific educational possibilities to isolate oneself psychologically and read or think, or to open oneself to the unforeseen and establish a relationship that couldn't otherwise be established. These specific educational possibilities offered by transportation time are multiplied by vacation travel. Many drop-outs and other persons have pursued this form of education. "While others publish or work, I have spent three years travelling to forget everything I had learnt with my head. This unlearning was slow and difficult. But it was more useful to me than the instruction imposed on me by men; it was a real beginning of education" (Gide, 1917, p. 71). When will this "beginning of education" be taken seriously, and not lightly as a more or less crazy or romantic pastime?

3) From 7 to 9 p.m. and from 9 to 11 p.m. The time of autonomous cultural production

Electric light prolongs the dusk. The hours 7-9 p.m. and 9-11 p.m. are here included in this intermediate time between hetero-education and self-development. They are not only the hours of diversion and media consumption. They are also the times for cultural production of one's own, which consists more in a pursuit of personal interests. It is the time for encounters and meetings, for personal or social development. Some will use this time for political or trade union activities. It

is also the time for evening courses, which, though fundamentally a reproduction of day-time education, belong to some extent to the realm of the night. This is borne out by the difficulty they are having in gaining recognition of their value and legitimacy, in attaining a "place in the sun". These hours of prolonged dusk lead gradually to the middle of the night, the centre of self-development.

3.3 Midnight, a centre of weak concentration (Bachelard, 1971, p. 127)

The lights go out, people disappear, social activity ceases. It is the time for sleep and the time for lying awake when sleep will not come. These two times, often seen as residual counter-times, are the key times for self-development.

1) *Restful sleep - an unconscious, almost organic time of self-development*

Is the time of rest a dead time or a "happy vibration" (Bachelard, 1963) carrying people by a subtle dynamic or harmony into sleep, which occupies about one third of each day? For those who want to live 24 out of 24 hours, this length of time alone justifies the apparently nonsensical question as to the educative value of rest, an activity that culminates in sound sleep.

The sayings "sleep restores" and "sleep on it" show that sleep does not simply rebuild the working capacities but produces certain specific effects. It transforms by means of unconscious work on the biological, psychical, social and even cosmic elements. The sleeper is an unconscious creator of multiple and complex transformations which cannot be reduced to abnormal pathological activities. These unconscious activities are normal, vital, and self-developing.

Recent sociological research on the dreams of the various social classes has at last de-psychanalysed this imaginative, constructive activity of every human being (Duvignaud, 1979, p.79). When reading the sibylline interpretations of the dreams of the rich and neurotic given by psychoanalysts, who often belong to the same categories, one forgets that a worker and a farmer can dream differently. We are robbed of our dreams which are considered too difficult or too dangerous to interpret, being seen as indications of psychological malfunctioning that should be kept hidden as far as possible. This recent research

shows that the contents of dreams vary considerably according to social class. Peasants dream of communication with the living and the dead; white collar workers of leave; manual workers of enhanced physical abilities; teachers of transfers; the young of death and the old of their erotic experiences. Duvignaud does not want to suggest a unique schema. But he opposes the pretentiousness of the Freudians who wish to do so by reducing the dream to a sexual delirium. "The dream is the place where man, left to himself, faces the great natural phenomena - death, hunger, sex and violence - to which he is subject despite all civilisation" (Le Monde, 30.3.1979). "Dreaming means choosing one's self by an always particular logic ... it means affirming the ascendancy of the possible over biological and social determination."

The unconscious and imaginative dimensions of the personality, long neglected by education, are gradually being taken into consideration by educational thinking, though more often in the limited sense of therapy and artistic creation than in that of constituent ontology. But there seems to be another equally important principle of development that acts independently of the conscious self, often even against it. "Though it is difficult to draw the line which separates the domains of the nocturnal psyche from that of the day-time psyche, this line exists. There are two centres of being in us, but the night centre is one of blurred concentration. It is not a subject" (Bachelard, 1970, p.127). It is an *ante-subject* active within this "formative carnal space" (Bachelard, 1970, p.198) to which man returns in his deep slumber.

The nature of this *ante-subject* remains mysterious. It does not fit into our clear and distinct categories of the day. Is it the Jungian or oriental ego, that superior form of individualisation, that centre of everything? "The ego is constituted by the concentration of the multiple at the centre, and it also wants this concentration. It is the subject and the object of the process" (Jung, 1971, p.307). "Who will help us to descend into our depths? Who will help us to recover, to recognise, to know our dual being which keeps us in existence from one night to the other?" (Bachelard, 1971, p.128). Nobody but ourselves. And despite the difficulty, perhaps the impossibility, of answering this question: who is less sane: he who seeks an answer and advances on tiptoe, or he who suppresses the question?

2) Waking - a hyperconscious time of self-development

Sleeplessness is not easy to control. How many people who say or believe they have it under control have in fact to take sleeping tablets in order to sleep and to rest? Unless they do so, anxiety or anguish keep them awake. Being awake at night is disturbing and distressing. And few people keep awake. Yet it is a unique experience of self-development.

The night contracts space, blurs shapes, mixes the internal with the external, the objective with the subjective, the real with the imaginary. It overthrows the landmarks of the visual self. It is a tense listening to silence and to noises which cannot be clearly identified but which create original forms of co-existence of the self with the world. Cutting out these forms and constituting them, internalisations and externalisations come and go in rapid, uncontrolled succession, and dissolve objects and subjects. A dangerous panic caused by delirium, by fusion and confusion. Who will venture into it, give himself up to it? And, above all, who will come out of it? Who can afterwards decode these forms of nocturnal co-birth, which bring to life unknown states, "ante-subject" states, and unsuspected transformations? It is a self-formation of forms through an inextricable mixture of external and internal urges and impulses.

Awakeness at night is the time when mad desires, inspired by love or hate, the most severely repressed socially, surge up. It is the time when the desire not to be and not to accept only what the day brings, knows, and recognises, rises up from the depths of every human being who has not been completely suffocated by the constraints of day-time. This savage desire is fuelled by the obscure energy of unfulfilled possibilities, first in the form of opposition to and negation of what is. At first, this negativity is a blind force - powerful, raw, reactive, oppositional. It shows the dynamic of development that will diminish unless this negativity is worked upon, listened to, joined in its very negativity by those evincing it. "Any exploration of the secrets of development begins with an evolutionary approach" (Durand, 1969, p.227). And this negativity is the conscious beginning of real self-development.

This work upon the negative is one of the hardest tasks there is. It isolates man in a fog within which nothing is clear, certainly not the self - and where everything has to be recons-

tructed: words, things, instruments. This reconstruction cannot be achieved if one remains in the night. After the night comes the dawn, but once the fear of darkness has been overcome, it is very difficult to come out of it and face the day.

3.4 The dawn - confrontation of self-development with hetero-education

Dawn is generally welcomed because it dispels the terrors and the distress of the night. With the return of light and day activities, the night and its productions tend to be pushed aside and repudiated. Dawn marks the division of many dual lives. This split is a way of life. How many desires for change that were born during the night never see the light of day! Lifelong education will not become a truly liberating movement unless it is prepared to deal with this contradiction between the shattering realities of the day and the nebulous desires of the night.

"Lifelong" education cannot be established upon the colonisations of one time by another. In any case, as has been shown, the rhythm of day and night has a hard, cosmic, and biological core, which will resist any attempt at round-the-clock education. But if this rhythm is to serve as the basis of a dialectic lifelong education, the nocturnal pole of self-development must be developed in order to become an efficient counterweight to the powers of the day. The socio-individual dialectic of education can only develop if it is built on the temporal, every-day, and lifelong education provided by the day and the night.

4. Conclusion

If lifelong education is taken literally, it is necessary to approach, in a non-privative way, what the professionals in formal education call non-formal education. In the foregoing, a very important section of this non-formal or informal education has been considered which seems to concentrate it in time: the night. Night-time seems to be the propitious time for self-development. The integration of this "residuum" implies more than a simple addition to the knowledge provided by formal education. This integration requires a radical re-definition of the educational process. Two approaches to such re-definition will be indicated below. One concerns the concept of development, the other that of learning.

4.1 Development - a function of human evolution

Speaking of development rather than education has the advantage of avoiding a concept that characterises a very particular practice: a temporary action of adults on children. This change of terms also indicates an important shift of meaning from a more analytical and external sense to a more synthetic and internal one. Developing oneself, giving oneself a form, is a more fundamental, more ontological activity than educating oneself; it means elevating and enriching oneself. Development implies that there is no finished form which could be imposed on us from the outside. This always unfinished form depends on our action. Constructing it is a lifelong activity. The chances of this concept depend on exploding the myth that the adult is a complete being. Not only is he not a complete being; he has to struggle all his life to integrate the various influences and to exist as a unified totality. Development is thus seen as a function of human evolution (Honoré, 1977, p.57).

This function will itself evolve under dialectical conditions of practice. It will be exercised both by the individual (self-development) and the society (hetero-education), but at different times and places. It has already been shown that in adult age nocturnal space/time can, in the basic temporal dialectic of day and night, be the most propitious time for the birth and growth of self-development. But this dialectic has also to be seen in the diachronic perspective of the different stages of life. In the first two stages, childhood and adolescence, development by others predominates. At first, this predominance is absolute; the formation of an embryo is the product of a union of two other persons. Then it lessens as the child becomes more autonomous. Adult age should see a Copernican reversal of the conditions under which this function of development is carried out: the pole "self" predominates.

The basic activity of self-development seems to be integration - synthesis, creation of forms - which only the self can achieve. The activity of hetero-education would then be the analytical activity of transmitting and receiving separate units of information. Self-development, so defined, would even have a separate cervical organ, the right hemisphere of the brain. Research on the organisation of the brain has shown that the two hemispheres control different functions: "The left hemisphere, the seat of processes enabling people to read, to speak and to calculate, is a tool of analysis and precision. It is the organ of logic and reason. It is complemented by the right

hemisphere, the seat of integration and synthesis enabling us to recognise forms. It confers the sense of timing and dominates artistic creations" (de Rosnay, 1975, p.258). Up to now, temporal education by others has primarily developed the left hemisphere, the hemisphere of analysis. Self-development should develop the right, the hemisphere of synthesis.

4.2 Learning - an ecological activity

There are a large number of very complex, refined, and elaborate theories of learning. The only one that provides useful and usable categories for an analysis of the educational function in its multiple places and times seems to be the theory propounded by G. Bateson (1977, pp.253-282). These categories are schematically presented in the table below.

Starting from Russell's theory of logical types, these four categories (Learning 0, I, II and III) interlock by means of "ordering the learning processes according to the hierarchic classification of the types of error that have to be rectified in the course of the various learning processes. Learning 0 designates the immediate base of all these acts (simple or complex), which cannot be corrected by the process of trial and error. Learning I is the designation for a revision of choice within an unchanged set of possibilities. Learning II corresponds to a revision of the set of possibilities among which the choice is made, and so on" (p. 250). The following table explains the criteria for this categorisation, presents the types of learning belonging to each category, and analyses one case: the meeting of an attractive woman and a handsome man in a lift.

CATEGORIES OF LEARNING

Source: Gregory Bateson, 1977, pp. 253-281

Categories of learning

Analysis of a case: Meeting an attractive person in a lift

Learning 0: Reaction with no possibility of correctionAttraction felt but not shown
Impassiveness

Examples: stereotyped reaction

No learning

routine activity

Learning I: Reaction with possibility of correction within a set of specific possibilities

Sexual invitation through a reaction that is part of the sexual code. A non-response provokes another attempt within the code.

No ambiguity or contradiction

*Learning of sexual approach*Examples: Pavlovian conditioning
training
repetitionLearning II: Reaction with possibility of correction by extending the possibilities of reaction

Possible sexual, but also social, personal, professional, etc. reaction

- opening up other sets of possibilities
- enlarging the context of perception
- possible ambiguity and contradiction, but within the limits of self-affirmation of the self, and of a view of the world

Sexual as well as social, personal and professional learning by man or woman

Examples: learning to learn
learning to see the
entirety of contexts

Learning III: Reaction with Personal upheaval
possibility of correcting the
sources of reaction, i.e.
the self

Examples: overcoming the con- - Questioning of the self
tradictions of II - of the view of women or men
profound re-defini- *Existential learning*
tion of the self
change of personali-
ty
of mental structure
of the frame of re-
ference

Learning of the context of con-
texts

NOTES

1. Interpreted by Jean Bollack and Heinz Wisman in *Héraclite ou la séparation*: "What then is the lifetime of man but a unity of ages? Not a life, as one might think, nor even a growth, not a son separated from his father, but a son-father endowed with another age. Thus the *aeon* (of an individual) includes the child he has produced and is accomplished when the child equals his father. The first years of life, in their turn, form the half of the next generation. The "ages" overlap, crossing each time in the middle."
2. A typical American spends 1,500 hours per year in his car. He sits in it, running or stopping, he works in order to pay for it, to pay for petrol, tyres, toll, insurance, fines, taxes, etc. This American needs 1,500 hours of work to run

the car for 10,000 kilometres; that makes an hour for 6 kilometres. In countries that have no transport industry, this is exactly the speed of walking the same distance; moreover, the walker can go in any direction. 3 per cent to 8 per cent of social time is spent on that purpose. What distinguishes transportation in rich and in very poor countries is thus not greater efficiency, but the necessity to consume vast amounts of the energy conditioned by the transport industry" (Illich, 1973). In France, J.P. Dupuy has calculated that for all social classes, the bicycle attains the highest speed in terms of kilometres per hour.

3. Françoise Erbs, analysing her self-development.
4. Mass-produced here means "the groups of people waiting for the bus..., who experience in the banalities of everyday life the situations of solitude, reciprocity and unification brought about by external circumstances (and the transformation into masses by outside forces) which characterise, for instance, the inhabitants of cities when they find themselves assembled without being integrated through work, struggle or any other activity of a common organised group" (Sartre, 1960).

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p. 25: "If electric light has escaped attention as a medium of communication, this is precisely because it has no 'content' ... The message of electric light ... is absolutely radical, decentralised and enveloping ..."

p. 71: "Electric lighting has destroyed the order of night and day, of inside and outside ... Those who ask themselves about media would hold the key to the power of all media to reshape the lives they touch if they would only reflect upon the power of electric light to transform even the smallest of the structures of space and time, of work and society."

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"More than the steam engine, and dominating the various technical revolutions, the key machine of the modern industrial age is the clock. It is a machine that produces nothing except order and measure, allowing the universal application of the principle of balance, the basis of the trading society".

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Chapter 6

Space Learning and Lifelong Education

G. Saez

1. Introduction

Our relationship with space is a direct one. Everybody lives in space, every object finds its place in it. The first ability that is socially developed, together with language, is knowledge and experience of space. Psychologists such as Piaget have shown that the stages of structuration of an individual's psyche are also the stages of his structuration of space.

This knowledge of space is acquired through processes so ancient and internalised that they appear to be "natural". For centuries little attention was paid to it. Societies with a stable structure pay no attention to it either; they rely on the immense knowledge of space they have acquired through the ages, without, however, being able to analyse it clearly.

Why think about space? In particular, why make it a foundation of lifelong education, seeing that by definition every educational activity is supported by space? One justification of such work would be to reflect upon the "educational" potentialities of the particular spaces we call "educational". This aspect will be only briefly dealt with here, for it assumes that the question of the individual's relations to space is already settled. But these are complex relations that should be elucidated as far as possible. To guide us in this labyrinth, this study will advance the thesis that there are profound homologies between space and education. The relation to space, like the relation to experience, is continuous: both are lifelong learning and lifelong experience. The necessity to re-examine these two apparently so closely linked realities arises from the high degree of complexity attained by our industrialised societies and their dependencies. These have produced such pro-

found changes that knowledge of space and the relations to space become less and less obvious. Space has become problematical.

Asking the man in the street what he understands by a certain notion sometimes produces astonishing results. For instance, if a townsman is asked: "What exactly do you understand by space?" the chances are that he will reply: "Man walking on the moon, the spacial, the Salyut tests". Another might add: "There is not enough space here". The same question put to a farmer may also get two responses, either a request to explain the question or a remark like, "Oh, there is quite a bit of space here".

Are these spaces the same? What is the significance of the answers given by the townsman and the farmer? Firstly, and no doubt essentially, that space is a cultural category. It is difficult to imagine these individuals struggling with an abstract space; they can only be imagined in the concrete space in which they live and which they mould. Moreover, each space depends on long, numerous, and complex learning processes which each society develops in its specific manner.

The answers also show that space is not a homogeneous or fixed category that can be conveniently standardised. For the inhabitant of a large city, science and technology have pushed back the frontiers of space to the point of dizziness. To understand his place in the world, the city dweller has to refer not only to his sensory experience - the space he knows - but also to the space which science discovers every day. He lives in a world where space is unstable, and he has to adapt his behaviour and ideas to this instability. He has to take it into account in all his plans. He also has to learn space, learn to extend it and master it. And that is the difficulty he has to cope with.

To the farmer, space is stable. It is a sensory experience. Installed on a soil that has been known for generations, he is heir to a long tradition that has assigned to things a virtually invariable location in space. He structures his psyche in a slow process of maturation: The space he looks at, in which he lives, penetrates his way of life and transforms him, adapting him to the society. Through a kind of osmosis, the structures of space imbue the individual and bring about an adaptation characteristic of rural cultures.

These ideal types - the farmer, the townsman - have been roughly outlined in order to bring out two sides of the same reflection about space: in a world where space has lost all stability, where it is no longer a reference point, how can an understanding of space help us to master space and the world, individually or collectively? How can we, with the aid of space, better assess what we are, what we are living for, the values we cherish? How can an individual find his place in the world knowing that it is always the world which assigns a place to him?

Having clarified the status of space, the observations that follow will be based on two theses that are in constant tension. According to the first thesis, a process is going on under our eyes which tends to planetise space, to turn it into an instrument of social management by increasingly detaching it from sensory experience. This process includes the current trends to divide up space and the emergence of "scientific disciplines" of adaptation of space which rationalise these processes. Though urban space is not at the core of our concerns, owing to the intense work to which it is subjected, no kind of space really escapes this division.

According to the second thesis, the whole or part of our identity depends on our relation with space. In principle, our relation with space is a relation with others, with culture. But only in principle, for this relationship that contributes to the rapid changes going on in the world is steadily weakening. However, the argument in this paper is that it can be sustained and developed if it is conceived as lifelong learning. Then the relationship with space continues to make sense; through this relationship people discover themselves, and create and understand their culture. It will here be called "*appropriated space*" or, what is perhaps a better term, "*territory*". Appropriation of space (as, elsewhere, appropriation of time, of the body) or territorialisation are considered to be major tasks of lifelong education. Although territorialisation alone cannot ensure the social identity of a community, if this social identity is not based on a place, a territory, it quickly breaks up and disintegrates.

2. The Status of Space

Our epoch and our sciences never cease to speak to us of space. Everything seems to be space: the space of the geographer, the mathematician, the painter, the psychoanalyst. Space

is non-Euclidian, economic, transnational, micro or macro. The list could be extended. Can we ourselves speak of the space of lifelong education or of space in lifelong education without falling victim to all the spatial metaphors? The argumentation developed here consists in gradually getting away from all these spaces and discourses about space, not in order to discover a space that is "purer" than others and on which a theory of learning could be built up, but in order to find a meaning in this multiplicity of spaces.

The various social sciences vulgarise the word space. They use it to designate what they want to know, the field in which they work, when they have no other name for it. There are as many spaces as there are sciences. Yet space is not a working tool, not even that of history, which creates models and puts its imprint on spaces and of which space could be the visible trace. This statement is not meant to deny the possibility of discovering, in archeological sites or in monuments, a way of past life, but what is actually discovered is not a space but a way of life. Likewise, derived or metaphorical uses of the word space will be avoided, not because the activities they describe are outside space but because they take place in space by definition.

But rather than worrying about the polysemantics of the word, it may be more useful to show that it is so widely employed because the old categories it replaces have lost some of their relevance. Observers say that a hierarchisation of space may provide a strategy for research. Thus terms such as state/politics.

Actually, when a region is considered from an essentially sociological point of view, the country from a historical point of view, and the state from a political point of view, their interdependence and interpenetration are forgotten and the analysis is impoverished. Other specialists adopt a different classification; they assign certain key concepts to certain disciplines. For instance, anthropology is based on the concept of culture, sociology on that of social relations, political science on that of the state. Geography is based on the concept of space and becomes, in a way, the science of localisation in space.

While geography obviously offers very refined and useful instruments for an understanding of space, it cannot claim a

monopoly because space, though not an all-embracing notion, is at least a cross-notion that opens the way to interdisciplinary research.

The dominant trend in social sciences is to turn space into a paradigm, just as language was seen as a paradigm some years ago in a series of studies inspired by the methods and concepts of linguistics. This way of using space as a central but never defined concept should be guarded against. Giving space an exceedingly high status, making it the very principle of happiness or a means of control and oppression, means reducing the value of the rules by which this space is produced, of the rules that form its image, of the manner in which it is experienced. This is an old trend, as exemplified in the eighteenth century by Bentham's dream of the panopticon, which was to make it possible to control a whole society by means of adapting space substituted for the master's eye. Is there a continuity from prison, for which the panopticon had been invented, to the society conceived as a prison?

The reversal of the formal and the ecological perspectives, which make space an arrangement of perceptible forms outside the individuals and institutions living in them, gives a unity to the notion of territory: The spatial order is no longer seen as a *reflection* of the social order but as an *effect* of it. As has been shown by Levi-Strauss in his famous example of the village Borero, there are undeniable profound homologies between the structure of social relations and the structure of objects. Nevertheless, the one cannot be studied in place of the other.

As soon as the emphasis is shifted to individuals and their relationships and to institutions and their functioning, space becomes social, as time is social. Neither space nor time can escape from the social relations that structure them.

The new concerns arising from this situation force us to concentrate less on the way in which objects are distributed in space and more on the manner in which individuals and social groups understand this distribution, on the spatial relations they establish among themselves, and on the particular repercussions space provokes in man's imagination. This life space exists at the heart of human activities. Assigning an educative value to it means revealing the multiple traces of knowledge and human experience imprinted on space in order to shape it and to turn it, more or less, into a work of art. This space obvious-

ly has so many dimensions that it is impossible to grasp it fully.

3. A Space that Moves Away

Space is a problematical reality. Its status changes rapidly. Space is always a product. But whereas in former times this production obeyed very precise rules and was determined collectively, today it has become an autonomous activity, unconnected with the population and often imposed on it. The production of space is becoming a purely economic or purely administrative activity. What dominates in the production of space is in fact a production of particular spaces, separated from each other, parallel and functionalised. It is, therefore, very difficult to think of space as a unity. However, the conviction remains that there are ways of life that can attenuate if not suppress the fragmentation of space.

The space of social relations is the space of home, work, school, and leisure. But in thus enumerating spaces and distinguishing one from the other, we are ourselves victims of the fragmentation of space. By attributing different functions to space (inhabiting, working, learning, recreation) we are already dividing it up, whilst at the same time proposing an undivided space, at least for the purpose of analysis.

The functionalisation of space marks a crucial period in our history that started with the great wave of urbanisation at the beginning of the twentieth century and put an end to the ancestral cultural model in which the various activities were intermixed, as, to a smaller degree, the various social categories were intermixed in space. There is at present a unified and unitary image of space, expressed in two terms: town and country. The strength and obviousness of these disclose that space is not yet problematical. It becomes problematical when social activities are separated from each other and confined in narrow spaces. It may thus be said that the modern idea of space as the capacity to abstract and separate social relations derives from the splitting up of daily life.

From that time on every social relation gradually gains autonomy. The sign that a social relation has become independent from the others is that it has its own unmistakable space. The most striking examples of this in Western societies are cemeteries and the proliferation of social ghettos. Death, being excluded from life spaces, becomes a special space, a dead

space. This process of assigning an exclusive space to everything and everyone is neither entirely new, nor is it irremediably impoverishing, provided that the key to the passage from one space to another is provided. The danger arises when these spaces are institutionally defined, programmed, and managed without the participation of those concerned. This intense spatialisation is not to be confounded with territorialisation.

The techniques of spatial zoning, applied in many countries and influenced by functionalist theories, are responsible for this fragmentation and segregation of spaces. Two consequences arise from the ceaseless application of these techniques for half a century. First, the separation of activities in space: When one has to go back and forth through town to work, to see a football match or listen to a concert, one simply traverses distances and learns nothing about urban diversity. Above all, one is badly equipped to discover the logic of this separation, for a space isolated from all other spaces tells us nothing about space.

The very fact that these activities (and the buildings in which they take place) are dispersed in space limits any attempt to arrive at a global understanding. But there is another, still more damaging consequence of the zoning in industrialised societies: social segregation. This constitutes not only an obstacle to a knowledge of space based on appropriation of space, it is also an obstacle to lifelong education, or to any educational practice.

Since social segregation arises from economic conditions, it can be eliminated only by a strong political will. Until social segregation, or at least its excesses, has disappeared, the learning of space will remain a pipedream. Segregation impedes any communication with others. For the lowest social groups, this is a vital point. When one is deprived of any profound experience of the spaces of others, a whole section of social life remains unknown and uncomprehended; civic, social, and symbolic capacities cannot develop.

The problem of segregation (and its more spectacular effects, e.g. vandalism, delinquency) defeats town planners, especially those who believe that well-designed urban architecture will produce socially good manners. But while it defeats some of them, others seem to accommodate to it. Sometimes segregation is even raised to the level of doctrine on the pretext that the evolution of minorities is primarily a matter of space

and that a homogeneous social group living in a limited space will by the nature of things develop specific attitudes and behaviours, viz. a culture. This belief helps to ignore the destruction of existing and potential cultures which segregation entails. The coexistence of different ethnic, social, and age groups is increasingly jeopardized, for the experience and knowledge of one section is no longer transmitted to the others. A striking case in point is that of old people, whose socio-spatial status has completely changed in a few decades; "geronto-cities", whole districts or towns for the aged, have been developed. The frantic instrumentalisation of space has turned it into a kind of central agent, an obligatory reference point in all acts of life. Space is being planned, set in the centre or on the periphery, programmed, arranged. Never before has space been the focus of so much activity. However, what is being abstractly planned or programmed is clearly not "space", but directly and inevitably the life of social groups. It is the proliferation of discourse about space that leads us to accept it as real and to make it an object of policies.

The raw material of this process is nature or, as the planners call it, "natural space". In this process nature loses its characteristics and gradually becomes objectified and operationalised. The strong link between nature and man that existed in rural societies is broken. Only a vague idea of it subsists: contemplation of nature and simulation of real nature, such as "nature reserves" or "natural parks", which inevitably render any experience of nature artificial.

Detaching man from nature is the precondition for making space an object and exploiting it as if it were devoid of intrinsic value.

Even history is losing its character of being the source of the present; it is becoming folklore. It no longer ensures a final identity, but rather provides an "identity reserve" from which one can draw as fashion dictates.

Nothing seems to escape this "pattern of signs".

That there is a space crisis cannot be shown in a few pages. But what becomes of space in the development of cultural values? Today space is a factor of choice. Walking in a town, finding one's way through it, presupposes that one knows its code. A number of signs serve as reference points, and we must learn to read them or refrain from living in a town. But these

urban signs have an inherent tendency to become detached from their references and combine into an abstract system. This produces a malaise, the impression that one can no longer experience a fullness. All that remains is a distressing void.

When it is considered that, in addition to this phenomenon, the modern pattern of signs tends to obscure the old reference points, the old spaces, the new situation will at once become clearer. How, for instance, does a Malaysian peasant experience the brutal passage to the universe of Singapore? Or the peasant from the northeast of Brazil who is abruptly thrown into the hypermodernity of Sao Paulo? In these cases, the rupture in space is a cultural rupture, i.e. a rupture in the learning process, a breach in the system of lifelong education.

As the way of life in industrialised societies becomes increasingly uniform, space also becomes uniform. Sometimes this uniformity seems to be a protection. The phenomenon of holidays shows that this protection can verge on the absurd. For millions of individuals, the word "holiday" does not signify a change of place, a new organisation of space, new experiences. There are holidays which are nothing but consumption, a mere rebuilding of the working capacity, and the organisers of holidays take care not to upset the structures of customary space. Thus they build in magnificent surroundings "holiday villages", which reproduce an artificial way of life unconnected with the surrounding country and providing temporary relief from the worries of work. Since they hardly differ from everyday space the educational dimension of such spaces is minute or nil. No effort is made to get to know the spatial codes of the host country and learn what they can teach us. Space becomes homogeneous through the reduction of differences. On the global level, the multi-national firms decide how space is to be used. To an even higher degree, the development of information networks initiates a kind of de-spatialisation. The relationship with space thus becomes more and more nebulous, and man loses his orientation, in the true sense of the word.

These phenomena are neither blind nor automatic, as is sometimes maintained; they can, on the contrary, be perfectly mastered by organisational techniques. If so, there could be a science of space which would permit a harmonious development of towns and rural areas and draft the best plans for the space of the future. This is a hope and at the same time a fear. It may be hoped that the resources of science and technology will provide instruments that will enable us to know more about how

space takes shape and what role economy, demography, and political and cultural factors play in its structuration. In any case, it is clear that the space for tomorrow has to be organised. But do we know how to do it, and do the specialists know it better than other people?

It is to be feared that a science of space developed by specialists behind closed doors would be one of the gravest threats to the idea of lifelong education. As has already been said, lifelong education is at the same time a process guided by our personality, an analysis of information received and a synthesis of this information. If scientific production of space is not included in lifelong education, and if we cannot analyse it because it is too opaque, then our ability to synthesise our spatial experience and practice will be affected. In order to avoid this, it is necessary to determine the characteristics of a space education integrated in the process of lifelong education.

Space education can no longer ignore the scientific disciplines developed to master space (urbanism, town and country planning), but neither should these disciplines encapsulate themselves and ignore the needs of space education. Perhaps they should not be understood as sciences but simply, and more accurately, as "arts of doing" that can be learnt by everybody. Mis-trust of these disciplines or arts of doing does not imply that they are illegitimate or that they should be condemned. It derives from an analysis of social science in the modern world, which tends to be sufficient unto itself, to ask its own questions and find its own answers while minimising or even rejecting questions and answers coming from its environment. In short, it tends to neglect experience from without. This rigidity enables the specialists to use their knowledge as a power by presenting their point of view as the best or only solution. It is important to recognise the relativity of the knowledge of these specialists; for centuries people have slowly worked out original solutions for the adaptation of space without the help of specialists. The harmony and sense of beauty displayed by a Tuscan landscape, the terraced rice fields in Bali, or the large cornfields in North America, are proof of this.

It is an immense task to prevent the knowledge of some from discouraging the initiative and imagination of the rest of mankind to the detriment of lifelong education.

4. A Space to Be Appropriated

One of the tasks man spontaneously sets himself is to know and understand how a number of phenomena combine to create the space in which he lives, his territory. He has to put his own imprint on this space by shaping or influencing the phenomena which participate in the production of space. Lifelong education organises the understanding of these phenomena and synthesises the various kinds of knowledge that contribute to it. Furthermore it can be a kind of meditation on the tools we employ to transform space. It introduces us to *appropriated space*.

Appropriated space is *territory*, as has been said. Appropriation is necessarily a long process by which everything that has been fragmented or destroyed by the advance of the economic system or by a badly controlled technology of space is reintegrated.

When the confusion about space is overcome and space is placed into a social dynamic, it can be shown more concretely that the real stake is not space as such, but a relationship that establishes very close ties between a group of people, their norms, their culture, and the place where they live or want to live.

Most observers agree that there is a "desire to belong to a place" and that this desire is the foundation of appropriation. For every social group or community, its relation to the soil becomes an endless source of myths, codes, and behaviour patterns. Within each group, more or less fixed structures which allocate a definite position in space to each of its members assign to them modes of actions and demand of them certain attitudes. Of course these modes of action and these attitudes are not static; they evolve. But they always express a conception of the world, a relationship with others. (The evolution of behaviour in Christian religious buildings offers a striking example.) This behaviour may in turn be flexible or rigid, exuberant or reserved, communal or individual.

This desire to belong to a place, which is also a desire to be, becomes stronger or weaker according to the obstacles it meets. It is exasperated in those who feel they have been deprived of their soil; it is almost non-existent in nomads; it is brutally asserted by conquering peoples. In fact, it has always

been a problem and seems to remain a major problem in the twentieth century, in which space is predominantly considered to be rarefied, withdrawing, fixed within political boundaries conceived as inalienable properties. Hence one of the most widely used means of domination and subjection has been the displacement of entire populations. These displaced populations were able to take with them their languages and their customs, but these rapidly deteriorated and atrophied as if the flow of sap had now been cut off. The fact that most cultures use an organic metaphor to describe man's relations to his territory indicates the strength of this tie.

There again, one should not fall into the trap surrounding the "desire to belong to a place". Some ideologies using this very vivid expression set up pseudo-territories, without providing the means of creating a real socio-spatial entity to satisfy this wish.

Where should this reunification of space begin? Which spaces should it include? There can be no doubt that it should begin with the corporal organisation of our entire perception of space - the *body*. Every culture imprints its norms on bodily gestures; eating and drinking, holding or embracing are needs. They express a relationship with life, with the other person, and at the same time they express every individual's singularity within a given culture.

Lifelong education attaches great importance to sports. At present they are one of the most immediate and fertile modes of access to lifelong education. But the problem of spatial corporality goes far beyond sports education. Firstly, sports education is only a part of the entire practice of sports; the abuses and manipulations committed in the name of sport are well known. Secondly, sports education does not always facilitate access to what appears to be the key to appropriated learning, namely a reflective consideration of the instrument, a mediating point of our thinking, then the difficulties come to light.

What, in fact, are the pertinent spaces, and how can they be made into instruments for a better knowledge of oneself and others, of the world? Everyone has a different idea of the hierarchy of pertinent spaces, from the immediate environment of the body to world space and - why not? - to interstellar space.

Research on the *perception of space* makes an indispensable contribution because it deals with aspects that are often neglected. Bailly (1977) has studied the psychological works on space. He shows that many important discoveries concerning personal and familial space are directly derived from technico-military applications or market research undertaken for publicity purposes. Evidently educationists, like town planners, have long neglected to enquire into personal-familial space. The predominant model in new constructions is still the cube, one cube being added to other cubes to form a bigger cube. In this respect, architectural innovations do not seem to have been widely diffused as one might wish. Lack of resources and the urgent need to build towns for housing, together with a lack of imagination, have produced an urbanism that can be maiming.

The analyses made by the Chicago School are most important contributions to this search for ideal space for social relations. According to these analyses, the neighbourhood as a living unit is the most likely place to develop a process of mutual education and individual self-education. Such a neighbourhood would be characterised by territoriality for it combines the phenomena of defence and attack, significance and identity.

What appears to be missing is the essential element of *political control*, which can give a social identity to a formal division of space. Other elements, e.g. arts and economy, also contribute to establishing this identity. There are a large number of social roles for everyone. And while a unity of these social roles has to be achieved by ourselves, by our image of ourselves, it is difficult to see what, other than political planning, could achieve a unity of space. Very often this unidimensionality is itself politically ossified.

The fact that there are many possible hierarchies of spaces indicates that one cannot choose to appropriate one particular space without violating others. By localising activities and people, we learn the essential rules governing the work relations and movement of people. This movement is not limited to any particular space, it occupies the whole of space.

But appropriation can also occur at another stage. By what indisputable criterion can we measure it? Some sociologists think that the number of associations in a given area (and the number of participants in these associations) indicate the

degree of intensity of its community life and appropriation of space. However, these indicators do not seem to be absolute. They merely indicate social participation and do not show that a process of appropriation is actually going on. Appropriation is never an automatic process; it is a constant evolution of spatial practice at the various stages of life. The criteria by which the degree of appropriation of space can be assessed vary in time, for at every stage of our lives we are confronted with a new problem. The use made of the same space by an old person, an adult, or a child obeys different rules. Similarly, town planners often despair because the space they have provided is not being used as they had expected. The reason is that appropriation often takes the form of refusal, even of revolt and violence. People will not uncritically accept the space others have modelled. In this sense the confrontation is not merely negative, but unquestionably also an assertion of dignity and, above all, of creativity. Despite the obstacles, we do become creators of our own life environment.

When the inhabitants become their own architects, or when they guide the hand of the architects, they appropriate their immediate space in principle. The town planners often find this spontaneity disastrous and its results disappointing because they seldom accord with the specialists' idea of a good utilisation of space.

The results also seem disappointing because the resources of imagination we are prepared to allow individuals, compared with the secular domination of former times, do not seem to find real expression today. How can a particular individual or social group produce, suddenly and by a kind of grace, a rich and harmonious space that meets their aspirations? Only learning can enable them to get away from the facile and stereotyped. Hence learning is an essential starting point, the legitimacy of which cannot be questioned. Emphasis should, therefore, be placed on the development of people's spatial practice: when space becomes an element of the developing culture and not merely an inert matter, a mere support, then there will certainly be appropriation.

In fact, appropriated space loses its purely objective character and becomes the place of intense symbolisation. Terms like "my district", "my town", "my country" come to life; they made. In this case, space can be considered, as Lefebvre (1974) says, as an analyst of the society rather than its reflection.

Let us take, for example, a medium-sized town that has preserved most of its monuments. What are its outstanding features? Doubtlessly, the seats of power. The Piazza della Signoria in Florence reveals the power of the Medicis, who fostered art and beauty and offered works of art to be admired by the citizens. A century later, the glory of the papacy found expression in St. Peter's in Rome. Everywhere in Europe, absolute power is represented by grandiose palaces. Still later, the industrial middle class celebrated its triumph by creating a landscape of tall chimneys and an architecture of the well-to-do. And the underground commercial centres in Montreal and the immense skyscrapers and open or enclosed buildings of the management centres in Chicago or New York are the most significant monuments of the consumer society. Thus the path of power through time can be traced along the places it has chosen for itself. These may be separated from each other or united in an ideal synthesis, as they are in Brasilia.

The town teaches us our history. This is one of its main functions along with its economic functions. This teaching may or may not be well organised. One can start out on the discovery of the town equipped with sharp analytical instruments, or one can do so more casually. Whatever the approach, the town has an integrating and socialising effect on us. The historian Braudel writes: The town "leads the barbarian to the civilisation of places and streets".

But space does not only make us encounter the past. It also forces us to take up a stance towards the present and what may be a present crisis. This crisis has given rise to such an abundant literature that it is unnecessary to add another interpretation here. Let us merely say that there is a split between the purely functional point of view and the requirements of social utilisation.

For example, which viewpoint predominates when a commercial centre is built: the satisfaction of needs, or profit motives? When a motorway is built: improvement of social communication, or improvement of goods transport? The cases where a society can reconcile these two points of view are still rare. The same difficulty lies at the core of the criticism levelled against educational institutions with regard to their relations with space.

If, as has been argued, space is educational because it constantly emits signals and reveals values, then the questions

arise whether enough attention has been paid to the places that are specifically responsible for teaching how to decode these signals and understand these values, and whether "educational space" - be it the school or the various social or cultural organisations that take over from the school and so appear to be real institutions of lifelong learning - is able to fulfil its mission.

In Europe these spaces have for a long time been separated because they involve separate social activities. Yet most experts have been seriously concerned about the crisis of the school. Most of them have argued that, in addition to the structural causes of the crisis, the spatial organisation of the school is one of the thorniest problems. The new curricula, some of them highly audacious and inventive, fail because the old educational spaces do not meet the requirements of modern education. Consequently, current educational experiments are inseparable from architectural and town-planning innovations concerning educational spaces.

The main goal of these experiments, and their common trait in many countries, has been to promote the idea of lifelong education by proposing a school outside school, the school after school. When it is considered that such activities as mathematics, sports, film, chess, all contribute together to the development of a person, then these activities no longer appear to be separate. The application of this idea to space has made it possible to integrate school activities with all other educational activities by making space flexible and elastic. Apart from technical restrictions, the space most adequate for a given activity can be created. But owing to insufficient thinking about the necessity of linking sports, study, artistic and recreational activities, efforts to integrate the various educational spaces have not been very widespread.

Another reason for this is the damaging separation of the diverse social times: the time of adults, old people, adolescents, young children; the time of men and women; of work and leisure. The organisation of new curricula should, therefore, take account of the fact that the *use of time* is also a *use of space*, as the novelist G. Perec has shown. An analysis of the first experiments with integrated educational facilities would be most useful for pursuing his thought further.

At the same time that space becomes homogeneous, the right to be different is strongly claimed as one of the solutions for

preserving cultural identities. But the right to be different is the most difficult to attain. It cannot be granted nor does it evolve by itself; if it is not to be reduced to mere tolerance and so lose its effectiveness, it has to be fought for.

The right to be different gives back a meaning to places, whereas the modern world produces a space without places. Just as the right to be different has to be won, so the appropriation of space cannot be simply the result of a decision but must be a process engaged in by the inhabitants concerned, a process to which they give a meaning. This process involves some questioning: First of all, questioning the functional model of space according to which space is nothing but a "machine to inhabit", as Le Corbusier said, or a "production machine", or a "consumption machine". This questioning may have penetrated into the domain of theory, but it is slow to penetrate reality. If the results of some investigations are accepted, it becomes clear that the image a person has of space depends largely on the concrete characteristics of the spaces in which he lives. It is, therefore, to be feared that the aesthetic impoverishment of built-up space will entail a corresponding impoverishment of the imagination.

The poorest, emptiest spatial images are those of residential suburbs, of big housing estates with their shopping and recreational centres. In time these urban wastelands may develop a fuller life. But it will remain limited, for the very structure of these spaces has been reduced, cut up into schematic elements.

Space has been segregated "once and for all". The economic powers on which this segregation depends cannot be easily overthrown. Only an act of collective will can attenuate the worst of its effects. Cultural and socio-cultural programmes and communal action try, with varying success, to oppose the effects of segregation by stimulating spatial appropriation, the starting point of other appropriations and other initiatives.

5. Space, Power and Values

Geography leads us to believe that all powers have a spatial dimension. From this perspective one might say that there is no power without a territory and that every territory presupposes a power that has organised it. The geographer Claval (1978) even proposes a typology of powers based on types of spatial

occupation. This is an attractive idea, provided its limits are recognised, because it suggests that by controlling a bit of power one controls a bit of territory, or, conversely, that by controlling a bit of territory one attains a bit of power.

The conception of appropriation of space as an educational experience is built on such an idea. But this idea has its own limitations, for modern forms of power based on authoritarian displacement and on the generalisation of information networks do not need the same territories as before. Moreover, certain powerful movements, such as socialism or religious revivals, have only rough territorial implications.

In fact, the organisation of lifelong education becomes a crucial question when the processes of traditional socialisation in a given space have entered a crisis. In small spatial units, which are only perceived because they are "life environments" with a high density of social relations, the learning of space and of the values which space supports occurs almost spontaneously within the life of the community. This social control by the community is in the first instance a transmission of values, a code for finding one's place in space, for locating one's body and the other people. When this social control disappears because the "life environments" on which it could be founded disappear, a threefold crisis arises.

It is a crisis in the transmission of values, a crisis in the control of individuals, and a crisis of space. The life environments can no longer develop, and therefore space cannot be appropriated. It loses the symbolic properties it used to have and becomes nothing but a stretch of landscape. It no longer provokes questions or suggests answers.

However, the previous state of affairs should not be idealised. These closed localities and limited forms of life restricted imagination and knowledge and stifled those who were irked by community constraints. The enlargement of spatial experience brought about by travel and rapid urbanisation has generated the idea that liberty can only be gained if the tight community links are broken by the anonymity prevailing in cities.

But this breaking of community ties in order to enter the realm of modern alienation in industrialised societies is not a perspective which is vitiated from the start and entirely lacking in grandeur. It is generally forgotten that the passage

from a "closed" space to an open one at the same time opens up a new liberty and new opportunities for education and learning. For, just as we use only a small portion of our mental capacities, so we use only a small portion of our liberty. Translated into the political dimension, this means limiting the power of the big organisations and decentralising control from the collective power to the local level.

This dynamic explains the changes in man's relations to space that have occurred in the last three decades. Vast empires have been created, and these empires have perforce a very different relation to space than that of, say, a nation. In contrast to earlier empires, these new ones do not continuously expand in space. To them space, the conquest of territories, is not necessarily the most important aim. Their primary objective is submission to a way of life and, more than in the past, adherence to an ideology. These imperial ideologies are the only ones that can break the very strong institution of the nation-state, as the constitution of the two "blocks" proves. At the same time, the nation-state is the only current form of resistance to imperialist designs, as proved by the upsurge of nationalism in the world.

Our deliberations on territoriality and the need for appropriation of space should not deflect us from the challenge the modern world presents to lifelong education. The social space we know best and on which our immediate references are based must not be limited to what is within arm's reach or to the town or the village. At all costs our experience of space must encompass the world, for most important decisions today are worldwide. Knowing whether one's job is safe in a changing industrial region, or whether the soil will be irrigated so that it can produce a harvest, no longer depends on institutions that can be controlled because they are near at hand. These decisions are taken at the four corners of the world and concern the whole world. This illustrates the limitations of Schumacher's "Small is beautiful" and the dangers of an idealisation of the past and the community. A project that is confined to a local territory, a village, or a small town is a regression, a return to the past and, definitely, a limitation. The dynamic perspective introduced here considers appropriation as a primary requisite and a spring-board for a better understanding of the world, as a means of influencing destinies and not as an end in itself. In this perspective participation is no longer confined to a given area but transcends it as soon as it is well established. Learning to know our immediate space

and participating in it to make it a living social entity are only the first steps that should lead us to greater participation in the world.

6. Space and the Image of Space

Like other areas of learning, space is a foundation of lifelong education, as this paper has shown. Emphasis has also been placed throughout on the profound relationship between continuous space education and continued education of the individual by means of his educative experiences. The continuous interaction between experience and the knowledge already acquired by each individual has an analogous structure to that of progressive adaptation of space.

This analogy of space with lifelong education is, of course, also an analogy with *time*. In learning about space, in the impressions we receive from it, we experience time in the forms of past time, duration and flow of time. Movement, displacement, are generally measured in terms of time.

In the life of an adult, past time can often be synonymous with irreplaceable cultural riches on the one hand as well as with unbearable constraints and norms on the other. These two sentiments are only apparently contradictory. In fact, they support each other; change is never a complete break. The lived space of the adult is a perpetual quest to come to terms with determinants and constraints. The problem of individual liberty is also one of space. This is what the present debate on the instrumentalisation of space is all about.

If, as stated by the French philosopher Michel Foucault in taking up a thought of Bentham's, space serves to keep people under surveillance, it is then reduced to a single dimension and loses substance. There is, for example, an enormous gulf between the modern idea of space (Bentham's panopticon) and that of the Renaissance. The Renaissance saw space as a composite reflection. In this construction, the place of imagination remains intact; the possibility of finding in this tangle of lines and surfaces not only one but many meanings, is safeguarded, and with it our liberty, whereas in Bentham's interpretation everything is reduced to surveillance.

The difference between these two spaces is evident: Bentham's is conceived as alienated, whilst that of the Renaissance was characterised by personal appropriation. The learning

of space should revive this unending dialogue between imagination and space. Whoever visits a museum of maps and prints experiences an emotion; these old maps invite dreams. The world represented on them can be read from end to end, yet it retains its part of surprise and mystery. This element of surprise and mystery, this dialogue with the unknown which enlarges space tends to be suppressed in the concrete spaces in which we live. There it barely survives in the saga of "space conquest", conceived as a saga of modern science and technology with their spaceships and their computers.

As has been seen, our conception of continuing spatial learning based on the idea of lifelong education goes beyond a simple pedagogy of geography or town-planning. Space is seen as a rich composite text which helps to break down the walls between disciplines (exposing their relativity) in order to discover the relations existing between these structures. At the same time there should also be a kind of play with space, using it as a preliminary for artistic creation, transformation and appropriation. By always continuing to learn we will discover how much there is to learn everywhere.

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Chapter 7

The Role and Importance of Art in Life: Some Thoughts on Lifelong Education Conceived as "Learning to be"

I. Wojnar

1. Introduction

The present study forms part of a collection of papers on various learning areas which contribute to human growth. It has, therefore, been necessary to find a multi-dimensional orientation that makes it possible to consider man as a dynamic being, as creator of himself. The notion of "learning to be" has penetrated to all parts of the world, but it must be admitted that the inverse dictum, "being to learn", is equally justified. The two together constitute the very essence of human creativity and development. The originality of the idea of lifelong education lies in its open conception of man who "becomes ever more what he is". "In man everything is a pathway", the philosophers have stated; and on this pathway nothing is determined in advance. Each crossing represents a free choice depending on the wisdom of the individual. This is what education means - it is always basically self-development.

A quotation from Henri Bergson's "*L'énergie spirituelle*" may help to illuminate the ideas developed in this article: "If in all domains the triumph of life is creation, then we must assume that human life has its *raison d'être* in a creation which, unlike that of the artist or the scholar, can be pursued at every moment by every human being - the creation of himself by himself, the growth of his personality through an effort that draws much out of little, of next-to-nothing, and that incessantly adds to the richness of the world". In following this line of thought, the factors contributing to this self-creation must be inquired into, particularly the factor of art.

It may seem that there is no need to clarify the notion of art and that enough has already been said about art and education. It would, however, be an over-simplification to confine this study to art education, even in its highest form. In essence, this education contains a serious contradiction that opens up a new set of problems. Art is seen as a means of education, and rightly so. But at the same time artistic experience is entirely free, unselfish, and devoid of profit motives. It brings to light a profoundly human element which, without this experience, might remain hidden and dormant. Certain faculties of man, his emotions, his imagination, and his capacity to respond in a personal manner are awakened and stimulated by the disinterested character of art, which intensifies the moment in which it is experienced. The chain of such disinterested moments constitutes the richness of life. Thus, art has a dual character: it is a means of human education and a means of discovering the human being. Since creative man, i.e., the artist, has the most intense experiences, the artistic works resulting from these experiences are documents of what constitutes a more profound human reality. Art, while remaining a factor of human growth, appears as a key to a better understanding of man; it reveals his impulses, his anxieties, his problems.

Obviously, art and man are interrelated. There can be no art without man, and there can be no authentic human being without art, which expresses and confirms him. The whole history of mankind provides examples of this. Art is manifest in work processes, in all aspects of collective life. It has embellished production, personalised communication, intensified human relationships. The visual arts have emerged from the daily struggle for the means of living; music has been a consequence of communication. But man has also manifested his imaginative dimensions; he has created images, invented ideas. The entire development of art may be interpreted as evidence of the growth of man, as a source of a particularly rich and varied, though vague and imprecise knowledge demanding personal comprehension and a personal echo.

By art should be understood the entirety of artistic branches, interpreted in their dual sense: as created works and as creative activity. However, this creative activity should not be restricted to specifically artistic work. There is an increasingly broad understanding of art which includes individual life styles. The contemporary changes in art confirm the openness of this concept. Art encompasses both the artistic cultural heritage and the way of life. Both aspects are important for lifelong education: The transmission of the cultural

heritage assures the humanistic identity of man and the existence of lasting values, and art as a way of life. Art expands man's creative capacities. It counterbalances the possible dangers of cultural alienation and requires free, spontaneous, and diversified learning.

In this study, answers will be sought to some fundamental questions with the aid of the ideas that have been outlined. Firstly, the educational domain in the broad sense of the word will be investigated to discover the gaps in its relations with art. This is a kind of exploration aiming to identify needs in human education that art could help to meet. Secondly, there will be an analysis of the contribution which art, with its special resources, can make as a source of knowledge about man. The working hypothesis is that the identified needs will find adequate satisfaction. Thirdly, the practical implications of the foregoing will be examined. If it is true that art can be an intensive learning process available to man on his way to "becoming ever more human", it is necessary to prepare an organisational and material framework for such learning and to transform the ideas into concrete reality.

2. Needs

Educationists throughout the world are discovering important and disquieting shortcomings in the education of man. While noting success in the fields of transmission of knowledge and vocational education, they are concerned about the cultural aspects of human education - growth of spiritual life, man's emotions, his imagination, his attitude toward values.

Some educationists simply neglect these kinds of problems and concentrate their attention on those educational processes which prepare people for their practical functions, their vocational duties, and their social roles as measured by the objective criteria of career and success. But this "external" man, active and well-informed, with his material needs satisfied, becomes only too often a one-sided being deprived of an inner life, of elementary sensibility, indifferent to values. The well-known notion of "one-dimensional" man corresponds with the image of modern man "who knows much, thinks little and does not believe in anything", as Léopold Flam says in his *"L'homme et la conscience tragique"*. "Men of good will" in particular find that there are in present-day education "blank patches" or "vague terrains", a tendency towards pragmatism and utilitarianism instead of towards a more personal education inspired by higher values.

Translated into action, the necessity to humanise man demands a fostering of everything that constitutes his personality, inner life, moral attitudes, and consciousness. This programme for the defence of man aims to save his essence by resisting the anti-human forces which are engendered by the technocratic civilisation characterised by consumption, conformism, and the herd spirit. The need is felt for a new humanistic education based on cultural values.

Clearly, what is necessary is to emphasise the spiritual and poetic dimension of human life, which has become too fragmented and superficial. An analysis of the role art has played in the intensification of this aspect of life shows that there is an artistic thread running through it that corresponds to human needs on the personal and humanistic plane.

Art has been a part of human life since the dawn of history. It has found expression both in the activities of man and in his spiritual life. Rightly, there has always been an emphasis on the relation of art to work as well as to magic. The Greeks interpreted this dual aspect by defining art as at the same time a production and a creation identical with poetry. In the most ancient epoch, the functions of art, distinguished ever more clearly in thought and analysis, constituted a whole that may best illustrate the integral nature of human experience. Art embraced both expression (and hence communication) of personal experience and a cathartic effect, which brought liberation and relief. These functions were fulfilled especially by the arts akin to poetic creation and including the different forms and modalities of music (song, dance, etc.) and literature. There has always been an awareness of the educational effect of art, of the fact that art inspires and directs human souls. A certain dualism of art helped toward a better perception of its role in human expression. The visual arts, linked with production and manual activities, were stable values; they invited contemplation leading to peace of mind. In the 19th century this group was labelled "Apollonian" arts, and the entire range of dynamic arts, where each individual experience means a new enrichment, was called "Dionysian". This dual trait of art which expresses and satisfies man's most essential needs by synthesising the practical and spiritual sides of his being.

Philosophers have often explored the poetic universe of man and sought to find reasons for the stability of its character. Indeed, the usual view of the genesis of art has never

been satisfying for those who thought about its human aspects. An astonishing fact is the stability of the themes expressed in the art of all epochs, even our own. This problem has been pertinently formulated by Karl Marx, who said that, while it is comparatively easy to understand the genesis of art by means of analysing the conditions under which it was produced, there is not always an answer to the question of why Greek art remains a lasting yardstick and an exemplary model for posterity. This thought could be carried further by illustrating it with the aid of a parallel: the human condition changes in appearance in the course of history but always remains basically the same. If the strength of feeling with which present audiences follow the tribulations of the heroes of Greek tragedy appears surprising, it must be realised that they are made of the same human tissue and have the same sensibility toward spiritual and humanist matters concerning the relations of man with reality, with others, and with himself.

Art is the only field of human creativity that constitutes a synthesis of perception of the world and its sensory interpretation, the only one that requires, both for its creation and its reception, an active participation of the senses, emotions, and imagination. Research and reflection show that the idea of the ancient Greeks, who stressed the multiplicity of aesthetic experiences, finds expression in a form of experience which encompasses the emotions, the intellect, and the imagination. It is through a synthesis of these faculties that man best expresses and understands himself by personalising his relations with reality.

Thanks to art, man succeeds in satisfying to some extent his need for a sharper vision of reality. To a person leading an "external" life, concerned only with the utilitarian aspects of reality, certain things remain hidden and silent. An abyss separates one-dimensional man from the world, and this world appears to him hostile and alien. The idea of art as a means of making the world one's own seems right; man seeks, most often unconsciously, to perceive more sharply, to look at the other side of the coin, to penetrate to the core of things. All too rarely does education provide a global view of the world; the mass media contribute to an increasing fragmentation of this view, and the school follows the same model. Perceiving and understanding is an important need of man, who seeks a participation in the totality of being and is too often condemned to isolation. Through varied experiences, especially in the fields of literature, the theatre, and music, art responds to this

quest for communication with a human universe richer than any particular being. It offers man an enrichment of his existence; it allows him to expand the dimension of his being through imagination. This is not merely escapism, though that also plays a role in seeking artistic experiences. Rather it is a desire to communicate with others, to understand them in their reality, and to gain a personal enrichment thereby. There is a growing need felt by people to widen both their vision of the world and their leisure activities beyond passive reception unrelated to authentic interests. This need sometimes finds expression in the search for free activities, a break with everyday habits, an urge to transform one's existence by adding to it the flavour of personal adventure. The conformism of a life imprisoned in urbanised pursuits calls for an opening of the imagination, understood as the capacity to enlarge the frame of everyday experience. The popularity of amateur artistic or dramatic activities bears witness to this need, which is stifled by passive leisure.

One important area of artistic expression is corporal expression. The body is the raw material of human creation. Man constantly expresses himself through the voice, the senses, through gestures and movements. Music and dance vitalise his inner rhythms by concerting them with the expression of the body and so engender not only personal satisfaction, but also equilibrium and self-mastery.

Certain contemporary artistic works are designed to shock the public by inventing unforeseeable situations; they emphasise the role of coincidence and free imagination. Sensitive to everyday life, sometimes even fascinated by the part objects play in the life of modern man, they make him understand the conflict between man's power over things and his fear of the power of things over man.

Art helps to define anxieties concerning both the eternal elements of life and the immediate reality. It thus becomes a source of collective and individual self-awareness. Evidently, this kind of awareness calls for some relationship to art; it results from experiences provoked by contact with works as well as by artistic activities and gives rise to an artistic culture blended with emotional vitalisation and the growth of sensitivity.

Art reveals the interdependence of body and spirit. Some painters have sought to convey the identity of the human being

that changes with age and modifies his corporal expression. The same concern has inspired those writers who are always sensitive to the temporal dimension of human life, the dialectic between duration and change.

Man improves and expands his capacity to understand through the emotions, which generate an "efficacious wondering", but it is the wakeful intellect that controls emotional life. Thus, an inner equilibrium, one of the essential needs of man, is achieved.

It follows that certain aspirations of the human personality manifest themselves through art and so become explicit. These aspirations, which are essential for the growth of man, do not find satisfaction in the circumstances of life.

Art as a form of production reflects man's need to embellish his life and to find joy in productive activities that involve an element of creativity, while art as a spiritual dimension of life manifests his desire to perceive and understand the world with the aid of sensibility and imagination, through communication with others and through lived experiences. Thus, art represents a certain ideal of the total human being to which his spirit aspires.

However, it would be wrong to limit these human aspirations and needs, which best express the essence of what is human, to the life of individuals. They are equally necessary to strengthen the powers and express the emotions of large communities. Art is involved in all human problems, political, national, social or economic, and these problems furnish proof of the existence of aesthetic needs.

As a component of all human activities, art contributes to the improvement, especially the embellishment, of the setting of life; it gives it the special character that expresses a particular culture. In our epoch, in which increasing efforts are being made to build up a "human world", artistic creativity plays an important part alongside scientific and technological creativity. The setting of life reflects the culture it represents.

Integration of art into social life is, however, not confined to external realities. In its most ancient forms, art was religious and ceremonial; it also represented collective patriotic feelings. The external setting had its counterpart in music, sometimes also in pageants, such as the great religious

or patriotic ceremonies which inspired collective emotions, the communion of human beings. Art thus not only embellished life but ennobled it with its symbols and inspirations. "It is not a separate activity, divorced from current social life and juxtaposed to it as a dream is juxtaposed to the life of man awake", says the philosopher M. Souriau; "art penetrates the most prosaic social life from all sides, it vitalises and expresses it and collaborates with it". It is a life force.

Furthermore, art ensures the continuity and identity of a culture through the transmission of values which take on new life with every new generation. It links the past with the present. All this leads to a recognition of the kinship between art as an expression of man's needs and art as a means of satisfying these needs. This line of thought leads directly to the question of art and education.

3. Opportunities

Interdisciplinary research in various countries all over the world has revealed little-known aspects of art education that go beyond the traditionally recognised forms of developing good taste and a feeling for beauty. It is now acknowledged that the relations between art and education can be expressed by two distinct pedagogical conceptions: First, art education understood as the development of aesthetic sensibility in man, which is necessary to know and appreciate art. This is education for art. The second is a more general educational orientation aiming to develop an integral human personality *through* art. In Professor Suchodolski's formulation, education should indeed serve art, but above all art should serve education. This means considering not only the intellectual but also the moral education of man through art, without neglecting the stimulus it gives to his creative abilities and his imagination.

3.1 The programme of education for art

Education for art concerns the development of aesthetic culture in man, in the form of appreciation of ancient and contemporary artistic phenomena. This attitude consists above all in providing the necessary knowledge and engendering an emotional involvement that will ensure a personal appreciation of values and, consequently, individual choices and judgements. The latter are conditioned by a certain number of experiences provided by encounters with various works of art.

Great importance should be attached to an acquaintance with art commensurate with the universal character of the world of art in which modern man lives. The constantly growing exposure of today's public to historically and geographically very diverse values must alter the nature of art education. An education restricted to the achievements of European culture is no longer adequate; consideration should also be given to the cultural contributions of the Third World and to popular cultures as expressions of the pluralistic nature of culture, which embraces not only highly diversified works of art but also various ways of living and working.

Neither can an education be restricted to the traditional art of the past. This used to be characteristic of school programmes limited to 19th century culture and hostile to the artistic controversies of the modern world. But the fact of pluralistic art implies pluralistic solutions in the educational domain. The opinion that only the art of the past merits attention is as unacceptable as the view, held by many young people, that art was born in our time. Education for art should prepare students for a broad acceptance of the diversity of art. It should introduce them to interpretation, to an understanding of the processes of evolution and natural transformation of phenomena, as well as to an awareness of the general socio-historical influences that have conditioned art. Attention should also be paid to the new idea of "open beauty", which expects of the public not only knowledge and sensibility but also some activity, even an effort. Encounters with new artistic works demand a constant reappraisal of value judgements, even vis-à-vis the art of the past.

Education for art is a matter of tolerance and choice. A sophisticated and sensitive individual develops a capacity to make personal value judgements and express individual preferences without assuming them to be generally valid. He will say: "I don't like that", but never "This is bad". He will become increasingly receptive and accommodating towards the works of others.

The content and nature of personal experiences occasioned by reading and by visual or aural perception may become the basis of an equilibrium between knowledge which is sometimes one-sided, and sensibility, which is sometimes merely emotional fascination. Neither the aesthetic culture of an art historian or expert nor a passive submission to the charms of a work of art can be considered ideal by itself. Knowledge should intensify

experience, and experience should render knowledge more personal.

At a time when we are inundated by mediocre pseudo-values on the one hand and by superficial experiences on the other, education for art becomes a crucial matter. Man needs some orientation in the world of art in order to enable him to find in it authentic humanistic values, to experience the feeling of belonging to a universe of durable human culture, and to appreciate the richness of its variations.

The linkage of art education with the process of cultural diffusion helps to reach a higher stage in human education, i.e., education *through* art. This involves all man's psychic faculties, in accordance with Herbert Read's statement that, if too much confidence is placed in intellectual power while the powers of imagination are neglected, the bad will triumph.

3.2 The relationship between art and the moral education of man

This relationship has always been quite evident, but it has been interpreted in different ways. From ancient times there have been two manners of thinking about art as a means for the moral sensitisation of man.

The first implies an orientation of his emotions and imagination toward a certain identification with heroes who embody the desired models and values. In this case, the educational effect springs from the evocation of sympathy and approval. According to this conception, the educational effect is conditioned by the moral values represented by the work, and by the proportionality of ends and means. Art, it is thought, exerts an influence only if it presents positive values. It is considered to have the power to reinforce essential moral truths. This optimistic view of art can, however, only apply to works that represent that kind of truth. Hence, choices are necessary.

The other way of conceiving the moral effect of art has its roots in the consideration of its cathartic and liberating effect. From this perspective, the dramatic values of art come to the fore. They involve violent passions, which contradict the principle of proportionality between ends and means. These dramatic values are found in works which offer no models to be emulated, and in which man is usually involved in complex and insoluble situations. The hero is ambiguous. He inspires neither sympathy nor approval, but instead provokes thought and generates new experiences demanding compassion and understanding.

Dramatic art may lead to pessimism and bitterness. However, a large proportion of the most famous works show conflicts rather than solutions, tragedies rather than happy-ends, problematic persons enmeshed in the vicissitudes of fate rather than happy solutions or victorious heros.

To a large proportion of educators, moral education through art is a function of the first conception. They believe that the work of the artist should suggest certain models and solutions. This is often true. Many examples could be given, starting with the heroes "without fear or blame". But consistent application of this conception would exclude the Greek tragedies and the works of Shakespeare, as well as a large number of contemporary works.

It would, however, be wrong to assume that there is no need for positive moral education through art. On the contrary, it seems essential for the early years of life, when the foundations of morality and of the principles of social behaviour have to be laid and the basic truths and judgements have to be taught. It is also very important in times of crisis, when optimism and confidence in mankind are shattered and a need is felt to strengthen the links with the world. In the life of adults, compensation is sought in artistic experiences of a comforting kind.

The advantages and shortcomings of the second conception emerge most clearly when its universal character is considered. As the number of personal experiences grows and the image of the world acquired from the products of artistic imagination seems to contrast more and more with reality, the part of moral education that could be called dramatic education takes on increasing importance. The questions to which man seeks an answer from art grow steadily more difficult. Imitation gives way to reflection and comprehension, and this leads to a critical and independent attitude, to a search for a personal moral truth, "a morality without obligation or sanction".

An attempt should therefore be made to harmonise the two conceptions of art. Obviously, art can, and should be, a source of confidence in man and in the solidity of moral values. But by presenting the complex image of life, art invites personal reflection and makes us aware of the insoluble drama of the human condition, the transience and instability of apparently lasting moral ideas and the solitude of man. The early affirmative moral education therefore has to be followed and complemented at a

more mature age by a dramatic moral education that stimulates individual consciousness and a need for personal knowledge of the world, of others, and of oneself. Understanding is followed, sometimes even replaced, by judgement. Personal experience enriches the acquired images of moral situations. Hence art should have its place in the context of the total human condition, to which the story of Cinderella is as necessary as the fate of Antigone.

Another aspect of art, the intensification of relationships, must not be neglected either. Art as a means of expression is at the same time a means of communication based on understanding. It leads to a commonality of experience. Sometimes this occurs in a theatre or concert hall, sometimes in a chain of experiences of the same works over generations. From a collective viewpoint, both simultaneous communication, which has the nature of an encounter, and communication through tradition are humanistic advantages of art that is close to life.

3.3 The contribution of art to the intellectual education of man

This role of art is not as evident as is its role in moral education. In current opinion, art is linked mainly with emotional life, while intelligence functions autonomously. But from the perspective of an integrated human education, art concerns all human faculties, including the intellect. It should be remembered that all intellectual education has a dual nature: it represents both an accumulation of knowledge and an acquisition of mechanisms of knowledge. In both cases, art seems to make an important contribution.

The starting point of the cognitive process initiated through art is the perception of external as well as internal reality. Art ensures a direct vision. It sharpens the senses and enhances sensibility; it helps to make those aspects of reality visible that would not be perceived by people deprived of this dimension, and above all it helps to "see whole", to apprehend facts and phenomena in ever new structures and contexts. These advantages are inherent in all branches of art. By helping man discover unknown truths through individual interpretation, art enriches his vision of the world, both ancient and modern.

This enrichment finds expression particularly in the function, appreciated by all educators, of illustrating reality. In this case artistic skill becomes a complement and concretisation

of facts and phenomena which are the object of scientific knowledge. Art thus acts as an intermediary between man and reality by bringing it close to him in individual images.

But it is not only in the sense of mediating objective reality that art provides a basis of knowledge. It is itself a cognitive process. It might be said that every artistic experience also constitutes an act of knowledge acquisition. From this point of view, the role of art in the intellectual education of man is not limited to representational works illustrating certain episodes in human life but concerns also those works that constitute their own worlds. Art belongs both to the world of the spirit and to the world of material reality. It can be seen as a human activity contributing to the creation of a human world, a subject already referred to in this study. Concerning the contribution of art in the cognitive domain therefore, two questions should be asked: first, what knowledge art conveys of the world it presents, and second, what knowledge is needed of art itself as a reality expressing man and his creative contribution to shaping the world.

As a symbolic activity, art inspires the faculty of expression through symbols and the ability to interpret these symbols. As a product of the imagination, it addresses itself chiefly to the faculty of imagination. The role of personal imagination is fundamental, not only for the artist-creator but also for the spectator or listener, who contributes to the effectiveness of the work through a creative attitude of perception. This phenomenon, which calls for commitment of the perceiver, constitutes an acquisition of knowledge, of personal knowledge. A formula widely used by American scholars in regard to personal knowledge may be referred to at this point. It is defined as knowledge deriving from experiences in which the intellect combines with the empathic faculties and with imagination-experiences which are the result of human creation, especially in the domain of art. Another concept is "left-hand" knowledge. This becomes a source of comprehension as against an accumulation of knowledge lacking this personal dimension. Comprehension thus comes near to the conception of moral education through art; indeed, it concerns both the cultural facts of the "human world" and the knowledge of man's existence. Every artistic creation represents, directly or indirectly, an "exploration of the existence of others". It is concerned with the problems of the human condition. An understanding of man (of others and of oneself) is possible only through the development of moral sensibility and through the discovery of a hitherto unknown dimension of the

truth about man. In this respect the role of art seems particularly important and at the same time particularly difficult. Personal artistic experience, enriched by the moral and cognitive dimensions, can become a source of knowledge of the human condition that is richer and more complete than the purely intellectual knowledge presented by psychology and sociology. It is a knowledge based on the empathic faculties and enhanced by a two-fold human experience: that of the artist and that of the reader, spectator, or listener. Hence it is an act of understanding others, cognitively as well as affectively, and this permits dialogue and communication.

In this context reference should be made to the idea of art as a "manual of life", a manual that serves not to provide static models of life but to encourage empathic efforts through works which enable man to acquire a profound self-awareness. Since art permits contact with the world of values as well as a deepening of each individual self, it leads both to a cultural identity of mankind and to the personal identity of the individual.

3.4 Art as a stimulation of the personality

When speaking of moral education, recourse must be had to critical intellectual reflection, but when analysing the cognitive aspect of the effects of art, emotions and imagination have to be considered. Both the moral growth of man and his intellectual development acquire an educational meaning when they are enriched by sensibility and imagination. Current educational theories are aware of and appreciate the educational contribution of imagination. It might even be said that the importance attached by educationists to free artistic expression, to self-expression through spontaneous activities, and to the originality of every individual and his "creative evolution" has led to imagination being considered not only as the basis of artistic activity but also as a dimension of human life.

Art as a product of the imagination is also an essential factor of inspiration; it can, therefore, play a part in all the processes, artistic or otherwise, that are involved in a new creation. Creation of "something new" occurs in all areas of human activity, and there is a link between the integral growth of man and the spontaneous exercise of his creative faculties. Free expression is a vital need of every human being, and the creative faculty meets his need for self-realisation through creative work.

In the present epoch, education through and for creative activity is assuming increasing importance. Imagination, expression, and activity are becoming the vital categories not only for the inner and autonomous world of every individual, but also for his relations with outer reality. The adventure of the spirit's encounter with the world, as John Dewey put it, produces at the same time an act of personal expression and an objective creative act contributing to personal development. Expression and creativity become instruments for becoming familiar with the world and understanding it better.

The opportunities which art offers to education on the cultural, moral, and intellectual planes call for appropriate practical applications at every level of man's development.

While art can contribute to the growth of man at every age, differentiations have to be made. Since the life of the emotions, imagination, and creativity are most intense in childhood, this is the stage which is most receptive to the effects of art in its integral sense. And recent research has shown that the creative forces in the domain of art obey the same principle that governs creativity in the domain of science. Consequently, the development of creativity in the field of art contributes to the development of creativity in human beings generally. It has further been shown that it is possible to transfer the creative faculties displayed by children to later life. In the light of this possibility, the free activities of children do not end with childhood, but serve to generate the attitudes and capacities necessary to the adult for activities which demand a creative effort. The American researchers Guilford and Lovenfeld have identified the following criteria for creative attitudes applicable to the world of art as well as to that of the sciences:

- (1) Sensibility to things and to life, which enables people to perceive and note the fine points in things and in the human order.
- (2) The ability to remain in a state of receptivity characterised by openness and fluidity of thought. The number of possible responses to a stimulus reveals a creative spirit.
- (3) Mobility, or the ability to adapt rapidly to new situations. Here a variety of responses likewise indicates a creative spirit.

- (4) Originality characterising divergent thinking.
- (5) An aptitude to transform the function of an object in order to make it more useful in a new form.
- (6) Analysis, or a capacity for abstraction which enables a person to proceed from a general impression of things to the determination of details.
- (7) Synthesis, or the combination of several elements to form a new whole. Assembly of several objects or parts thereof in order to give them a new meaning.
- (8) Coherent organisation, harmony of thoughts, sensibility, and self-awareness.

The powers of art take on concrete form in three dimensions: intensification (from early life) of a person's attitude to external reality and to the social world; enrichment of his sensibility toward stimuli coming from that reality; and inspiration of personal, expressive reactions. A creative attitude is primarily an expressive attitude, if expression means a personal attitude to the world. It should, however, be stressed that in the concept predominating in the "New Education", expression is identified with what is individual and totally personal, whereas nowadays the social and cognitive aspects of expression are emphasised. This indicates a movement toward communication, and hence toward the community. The Freinet school in France also interprets expression in this way. Thanks to the universal language of art, expression becomes a means of social education. At the same time it serves to develop the intellect by contributing to a personal awareness of the world through tentative groping, which is the starting point of the child's contacts with his environment and the foundation of self-education.

The essence of education through art can thus be understood as an integral process of stimulation of the personality - a process to which the person himself has to contribute by utilising all his psychic capacities. The awakening of dormant abilities seems to be a particularly important aspect of life-long education and of the educative society. Stimulation is a process of participation; the educative act becomes an act of

increasingly conscious self-development.

4. Implementation

The foregoing deliberations have related the needs rooted in the most ancient and most profound characteristics of human nature to link up with the opportunities offered by art as interpreted from the perspective of a philosophy or aesthetics of human development. The next step is to identify the practical consequences for art education in the sense of a personal and global process going on throughout life, from pre-school to old age. For art can accompany man through the whole of his existence, and it can stimulate his personal aspirations.

The implementation of education for art concerns both cultural and educational (school) policy, and this may cause difficulties in the course of realisation. As an introduction to active and substantial participation in cultural activities, cultural policy should orient and guide the processes of cultural diffusion.

The cultural universality of the modern epoch has revealed the gravity of this problem. There is no denying the importance of cultural diffusion for a democratisation of culture, i.e. for increasing access of the masses to values which have for centuries been a privilege of elites. But it is now being realised that the cultural heritage which was being diffused was primarily that of "old" Europe, whereas in our epoch the Third World has its own cultural contribution to make. André Malraux rightly said that the "museum of imagination", the symbol of culture accessible to all, was born with the independence of the Third World.

Present cultural animators often mistrust the diffusion of culture for two reasons: firstly, because the limited concept of culture pays too little regard to the preservation of the cultural identity of peoples; and secondly, because of the possibility that culture might be used for the domination or manipulation of certain classes or groups. On account of these hazards, they emphasise art as a way of life rather than as a cultural heritage and often envisage artistic culture as a movement linked with the changes in the economy and in social relations. Art should go out into everyday life and become a general and permanent activity for all. This trend has been considerably strengthened by the counter-culture movement and by the youth protests re-inspired by anarchic ideas about "the death of art" and its re-

birth in the form of a new art of living.

These trends should be taken into consideration in any plans to implement lifelong art education. The idea of integral art education, in which lasting and universal values are complemented by creativity, seems right. An equilibrium of these trends appears to be the only guarantee of an education worthy of the term. Attention may be drawn to a pertinent thought expressed by a group of Unesco experts while discussing the ends and theories of education:

"At the same time the ability to memorize, whereby the learner mentally summarized his cultural heritage, seems to have been set aside in favour of imagination and creativity. Is there not reason to wonder if the creative endeavour can be at all fruitful when the memory does not put at its disposal a store of knowledge to draw upon? Too much reliance on memorization prevents innovation, but doesn't over-emphasis of creation doom it to an affected formalism or a sterile pottering about? 'Imagination in power' is truly creative of new structures only when it has digested the acquired experience - rôle of cultural heritage - and transforms it into new organic units - rôle of innovation - failing which it turns to destruction, anarchy or the superfluous." (Unesco, 1975)

A balanced programme of art education should be implemented according to the following broad guidelines:

- (1) Art education should be a synthesis of knowledge of the arts and personal experiences; there should be sensitisation to the symbolic language of works of art as well as organisation of creative activities. This knowledge should, however, break with encyclopedic tendencies and assume a critical and personal character.
- (2) Art education should take care to ensure that the knowledge of art is deepened by personal contact with others, for the absence of such experiences leads to a knowledge that is totally abstract and educationally sterile.
- (3) The global character of art education should

be extended by an interdisciplinary approach in which each artistic discipline makes a contribution to education. This approach calls for collaboration among educational institutions, in particular schools and cultural establishments. Purely theoretical education, such as history of art, can be provided within the framework of traditional schooling through contacts with artistic works in museums, theatres, concert halls, cultural centres, etc. In order to ensure that the process is both interdisciplinary and global, all these non-school institutions should be approached in an attempt to arouse their interest in the possible educational effects of their activities.

- (4) The basis of education, including art education, is the school. The artistic branches of education should come closer together and contribute to the creation of an integrated vision of artistic culture. Moreover, they should be integrated with the other disciplines, thereby making these to some extent "artistic". This could be done especially in history, geography, civics, and physical education. However the chief objective of art education at school should be to get young people interested in art with a view to facilitating their later cultural development and self-education. This requires a more open and more inspired instruction than that provided by traditional teaching. What is needed is to give the young a taste for artistic culture and for creativity and to make them aware of the value of both for the life, growth, and happiness of man.
- (5) In contemporary education an increasing role is played by the mass media (a fundamental element of a "parallel school"). The mass media cannot ignore artistic culture. One could imagine an entire educational programme for children, youth, and adults based on cultural achievements. In some countries, a certain amount of progress has been made in this direction. But in general the situation does not appear promising; pessimism and conformism are dominant in the use of leisure time.

(6) In the framework of lifelong education, emphasis should be placed on the development of a variety of instruments, including the mass media, for polyvalent cultural stimulation. Tourism helps as well, since it facilitates cultural exchanges and better international understanding through contact with different civilisations. Throughout the world, a growing number of cultural organisations are exploring entirely new types of activity. An example is the Centre Pompidou in Paris, where an interdisciplinary programme designed for a new public is offered. The Centre Miró in Barcelona also has very original programmes for the young as well as for adults.

Art education should not be restricted to a specific discipline; it is rather a general orientation of education itself. It can, therefore, make use of diverse methods taken not only from artistic culture but also from the world of nature and from human achievements in the material and practical fields. The ecological movement seems to be an obvious ally of art education, for creative and sensitive human beings quite naturally produce a more human environment. Great social reformers have always had confidence in the power of art. The idea of improving man has been inseparable from that of improving the world in which he lives and on which he imprints his creativity.

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Chapter 8

The Citizen

A. Melo

With one voice, radio commentators, academic researchers, journalists, and party officials deplore the public apathy toward politics - except at election times, when interest is whipped up by the mass media. On the other hand, political information reaches every home on an unprecedented scale via newspapers, radio, and television. It is no longer possible to pretend that politics does not exist. Politics is involved in the higher price of petrol, in the seven-month wait for a simple surgical operation, in the long walk home during a public transport strike, and even in horror films.

When faced with a problem such as a drastic increase in the price of petrol, people's reaction is hardly one of apathy. They do react, and their (mostly verbal) reactions are very different in tone and content: "We should never have let those colonies go"; "It's the big companies that take the profit"; "When can we get that electric car?"; "Oh well, as long as the next wage increase will compensate for this"; "Why doesn't the government reduce the tax on petrol?"; "Boycott all petrol imports now! Back to the bike!".

All these reactions are based on information. It may even be assumed that the people making these comments have all had access to the same information, to the same political knowledge about the petrol crisis. Nevertheless a personal choice was made in selecting from the original information the specific factor most capable of expressing the feelings of each person. What is more, no one can distinguish the *right* reactions from the *wrong* ones. Some may be exposed to moral condemnation, and it is also possible to try assessing them according to their political *realism* or to classify them according to psy-

chological types, but no science can be invoked in order to separate the false from the true.

Some conclusions can be drawn from the above that may be useful for a gradual clarification of the concept of man as a citizen. One of them concerns *political opinion*, a subject of great interest not only to those who organise opinion polls but also to political militants, who consider the manipulation of personal opinions an essential part of their task. Opinions do not have to be scientifically sound; they reflect the ideology or philosophy of life of those who express them. To have opinions and be able to articulate them is a need very widely felt by the adult population. This requires, in addition to a general aptitude for lucid speech, the ability to define problems in all their different aspects, find and select all relevant information, and unify external data and internal values in a coherent opinion that faithfully reveals one's own *political self*.

The attainment of an integrated *political self* - i.e. a deep understanding of how one acts in society, how one thinks and feels about social issues, how one expresses ideas and tries to influence people or events - can thus be suggested as the main objective of any political education programme.

Obviously, political life does not stop at the opinion forum. Although opinions can be labelled dangerous or subversive by authoritarian regimes, an opinion is nothing more nor less than words; if it is to have a social impact, it must be followed by some sort of action, from raising an arm to support a motion to raising an army to support a cause.

Political action is thus the next stage in man's development as a citizen. He no longer merely forms an opinion about a social problem and the political solutions offered for it; he does something about it. Even for those societies which allow freedom of expression, this domain of political action requires very strict control. As a rule, opinions do not harm other people and impinge upon their freedom as much as actions do. "My freedom ends where the freedom of another begins".

Three different ways of relating to politics have now been outlined. They define three areas of interest for the political educator: political knowledge, political opinion, political action. These three aspects can be quite independent of each other; one can express an opinion without knowing much

about the subject, and one acts politically every day without necessarily knowing it or voicing opinions. It would be useful to add a fourth dimension to our previous list: political sensitivity. Apart from what is known, said and done, one can express *feelings* about a certain number of social questions.

Politics could, therefore, become an all-embracing concept. If man is a *political animal*, who lives in society and cannot survive outside society, and if we consider politics as a notion that comprises what one feels, knows, says, and does about social issues, then there is not much that falls outside its boundaries. It is thus a much broader notion than the technical concept used in such terms as *political science* or *political activity*, where the field of politics is mainly restricted to the single issue of attaining and retaining the levers of power in society. This somewhat Machiavellian meaning of politics should, however, be left to the specialists and the small minority that strives for power in any society. In fact, to most people it is this very idea of politics that is responsible for their lack of interest - if not disgust - with politics. What is important for the educator to grasp is that, even when expressing such opinions or acting in such a *negative* way, people are being political in the broader sense just described. For the purpose of general education, this wider sense is more useful. Politics so understood concerns everybody and helps reveal the inner personality; it can, therefore, become an instructive concept for describing personal self-development.

Stating that politics covers the entire field of social action does not, however, imply that it should supplant other areas of knowledge, such as economics or sociology. The point is this: At the level of social behaviour, these distinctions have little meaning. People do not act exclusively economically, sociologically or politically; rather, there are economic, ethical, psychological, aesthetic, and other dimensions involved in all behaviour. This article deals with the political dimension of social action, i.e. the dimension directly connected with the power mechanisms that ultimately determine what society is and is to become.

Two further general remarks may be appropriate at this point. First, this wide concept of politics should facilitate the search for a coherent social personality or *political self*, which is able to integrate knowledge, feelings, opinions, and actions. Secondly, if to be political means to be in so-

ciety, with others, then a person is not only political when talking politics, joining a demonstration or canvassing for a local candidate; one's attitude towards others - in the family, at work, at a football match, in a restaurant, in a hospital, etc. - becomes the permanent expression of one's political personality.

We all know cases of political militants who constantly make their opinions felt regarding the need for social progress and the liberation of all oppressed but whose social relations (with the other sex, with children, with subordinates) reproduce the worst features of social inequality. This does not invalidate their opinions; such individuals are simply manifesting in their behaviour the inner contradictions of the society in which they live. It is, however, one of the aims of political education, and of education as a whole, to help develop well-balanced individuals - individuals whose ideas, opinions, and actions become increasingly coherent.

Let us consider the family as a political microcosm. Here the entire spectrum of political regimes can find expression, from fascist to libertarian. Imagine the following scenario: the young daughter wants to watch a certain television programme; father wants to watch the other channel at the same time. Here are some of his possible responses: "All right, darling, go ahead and watch your favourite"; "I pay the television rental, I watch whatever I want"; "Just turn it over and shut up, or you'll get a wallop!"; "Don't make a fuss and I'll buy you an ice cream"; "Let me watch my programme today, and tomorrow you may choose whatever you want". Each of these responses reveals a corresponding structure of relations within the family. Such a scenario is a useful introductory topic for adult classes on politics. Where school children are concerned, every teacher should be aware of both the fact that they all come from different family *regimes* (which do not necessarily coincide with the opinions overtly expressed by their parents) and the fact that they are expected, once in the classroom, to abide by the dominant *regime* established at the school.

Who makes decisions within the family? How are decisions made? Are all those affected at least consulted? How are the inevitable conflicts of interest resolved or minimized? Autocratically or democratically? By real or by token consultation? Coercion or persuasion? Free access to information (e.g. how much the breadwinner earns) or secrecy? Is there strong parental influence on the children or are they free to develop

their own interests and aptitudes?

Up to now, a strong emphasis on the subjective side of politics has characterized this paper. By making the individual the focus of political interests, feelings, knowledge, and acts, we place, by the same token, a heavy burden of responsibility on his shoulders. Is an individual really a significant unit of political behaviour? To what extent are his social actions autonomous? To what extent can any individual detach himself from the family and from his social, national, ethnic, and historical background? This question is sufficiently relevant to demand a justification for this emphasis on the individual.

In politics, individuals are statistically irrelevant. Nuclear strategies are predicated on the feasibility of a first strike involving a loss of not more than 20,000,000 fellow citizens. What is the point, then, in making this one twenty millionth of a strategic calculation the centre of concern? One reason is the belief that education, in order to be relevant, has to be *subversive* in the sense that it has to counterbalance dominant social trends: It has to underline the social nature of human beings wherever the prevalent ideology idolises the individual, just as it has to rescue the individual when the abstraction of historical or economic laws tend to eliminate him from talk and thought. Furthermore, this study is concerned with political education, not politics; without an acceptance of the individual (even if he is considered mainly as a product of social and biological forces) there can be no education. There may be propaganda, training and instruction, but education requires an ever-present concern for the full development of individual potentialities, with *self-actualisation*, to use Maslow's famous concept.

The contributors to the present volume have been requested to define the most urgent educational needs felt by adults when confronted with daily problems (for the purpose of this chapter, with problems of a political nature) in order to help determine what the school should have given them, or should give children today, to enable them to cope with such problems in later life. No survey designed to ask adults what their political problems are would be appropriate here, for people do not view their immediate problems as political problems (e.g. "I fear death"; "I can't build a stable relationship with a woman/man"; "We can't make ends meet at the end of the month"; "Jimmy is not happy at school"; "We can't stand this for much longer, seven in a two-room flat"). And the response to the question of

adult political education would most likely be: Classes on politics? Actual and would-be politicians are welcome to them, not us."

Asking people what they need, what school should have given them, presupposes in the adult a deep and wide knowledge of what might be possible. Before educational needs can be better defined, a certain threshold of awareness has to be attained, and for this to happen, some cultural and educational activities may well have to be involved.

The first requirement seems to be, therefore, to feel the need, the lack of something that one knows exists and that should be accessible. Awareness of need grows out of dissatisfaction. However, for it to be felt and satisfaction to be sought, people have to be confident that such satisfaction is within the bounds of reality. Apathy arises from the feeling (or knowledge) that nothing can be done about such needs. What is the point of trying to learn more about issues when the most likely result is the discovery that many other issues are involved which are also beyond one's control?

Generally, adults are indeed motivated to understand better how society works, perhaps by a genuine urge to know more, or by the belief that something, even if of very limited scope, can be done to redress what they feel is wrong or to bring about what they feel is right. Greater interest can also be induced by adult educators who give free rein to what C. Wright Mills calls the *sociological imagination*, when dealing with subjects traditionally drawn from other disciplines. Indeed, any cultural or educational initiative can easily become an introduction to politics in the wider sense.

Once the adult is motivated to understand better the society in which he lives and the role he plays, a certain number of needs emerge that give rise to questions such as the following: Why did society evolve the way it did? What makes society work as it does? Where is my place in all this? What could I change if I wanted to? What is the ideal society?

This brings us back to the first paragraphs of this paper, where needs were related to what one feels, says, or does about society (political sensibility, political knowledge, political opinions, political activity), in short, to political personality, or yet again, to man as a citizen.

A useful starting point for any adult is to try to understand himself better by examining the way he relates to others. How do I feel about my family? My friends? My fellow-citizens? The rest of mankind? Am I here to give, to take, or to search for a balance of both? Do I feel happier about serving or being served? How strongly do I feel about injustice? Do I think that social inequality always results from injustice? Do I consider social inequality to be natural and inevitable or man-made and possible to redress? Are some people born to rule and others to be ruled? Who should benefit from social rewards: artists, scientists, soldiers, nurses, teachers, peasants, manual workers? Is social life nothing but struggle where only the fittest survive? Should the individual be sacrificed to society, or does he possess innate rights that justify permanent demands for personal welfare? Do I abide by the motto, *My country, right or wrong?* Am I, and are my fellow-countrymen, born superior to the rest of mankind, or at least to those with a darker skin?

Endless topics of discussion can be found for use with adult groups. By trying, from the very start, to avoid establishing an automatic majority opinion, the educator can indeed encourage honesty on the part of all participants. No sympathetic smiles, no patronising, no moral indignation. A simple, genuine concern for all opinions expressed, and a catching enthusiasm for finding out why different people have different opinions and what circumstances might have prompted them to embrace their particular social philosophy. Does it automatically depend on their life-histories, family backgrounds, social status, and level of income?

Some tests have already been designed to assess political personalities, mostly in terms of *right* or *left*, e.g. by describing situations in photographs where the *bad guys* and the *good guys* can be identified according to personal preferences. Many surprises result from such tests, with people who had voiced very strong *left* opinions being finally labelled *right-wing*. Results should therefore be thoroughly analysed and discussed: "Are tests inadequate?" or "Did I try to make people believe I am different from what I really am?" Awareness of some incongruence between feeling and opinion can provide the spring-board for a qualitative leap forward in the attainment of a more coherent political personality. In those cases where feelings and opinions seem to coincide quite well, an immediate question should follow: "And what do you do in consequence? Are your social attitudes and actions in line with the ideas you have

voiced and with your feelings? If not, why not? " One reason why action does not follow might be, naturally, fear of repression, if one lives in a dictatorial state or feels so frustrated with society that nothing short of violence seems to suffice. It can also happen that an adult is quite content to put ideas and feeling into practice on a small scale, that is, in his club or association, local community, family, etc.

The urge to act within the bounds of possible impact, or even the urge to expand such bounds, will normally lead an adult to search for a better understanding of social structures and movements. The first shock will result from confronting the huge amount of available information, much of which is quite unclear. Understanding society requires different categories of information. The enquirer first wants to know how society evolved, his own society as well as others; secondly, what thinkers and writers down through the ages have conceived as an ideal state for human societies; thirdly, how today's societies are structured and what their most important social, legal and political features are; finally, what contemporary political philosophies exist regarding the desired futures for our societies.

It is most important for any adult to be capable, first, of accepting the inevitable (and most enriching) existence of values in this field of politics, and secondly, of clearly distinguishing between areas where values are of utmost relevance and areas where an objective search for facts is the only valid and useful (even when frustratingly difficult) approach. A further level of political awareness is reached when one is able to identify the political values that inspired an author's selection, interpretation, and presentation of (apparently value-free) political facts. It is an essential task for the adult educator to develop this sense of critical appraisal of the information contained in newspapers and other mass-media, in speeches, books (technical or fictional) and magazines (general or specialised). A quick initial reading will reveal the particular bias involved. After that, a deeper insight into what has not been mentioned is necessary to complete the critical analysis.

As regards political information, it is also very important for the interested adult to know how and where to find the most useful documentation on the matters concerning him. Basic sources of information should be listed and made readily available. Whenever possible, dossiers on specific topics in

which primary sources have been abstracted and summarized should be compiled by adult educators.

A considerable percentage of those adults who feel the need for better education do so because they consider themselves at a disadvantage when trying to express their views in public. Articulate speech and logical argumentation are generally considered to be the hallmarks of the educated. Debates should, therefore, be encouraged by adult educators; not only do they foster a climate of reciprocal tolerance and *political relativity* they also help to create the self-confidence that underlies all articulate oral presentation. Debates should concentrate on major current issues and alternate with research sessions. As a means of evaluation of individual and group progress, comparisons should regularly be made between the earlier and later debates. The most important question to be raised during these evaluation exercises is certainly whether fuller knowledge does in fact alter intuitive personal opinions (and, if so, in what way). Stress has to be put on the fact that the aim of a debate should not be to win the argument but to reach a higher degree of understanding of the problem under discussion, thanks to the many contributions that have thrown light on its different facets. A useful exercise consists in using a debate to find minimal consensus that is still operational enough to allow for some sort of common action.

We have reached what was previously called the area of *political activity*. Political activity takes place within very different frameworks: political parties, trade unions, cooperatives, associations, as well as (if one accepts the wide meaning of politics suggested above) at work, at home, etc. Within a group of adults who have gone through the three phases of scrutinizing feelings, learning more and speaking more effectively, political activity has inevitably taken place, and the group should by now be quite aware of it. By analysing the internal politics in the group, it is soon possible to assess whether or not it has built up the necessary morale to embark on some degree of outside political activity. This should never be an initial objective, but it should not be excluded from the start, either. A letter to the editor of a local or national paper, a community newsletter, a play or street theatre, an exhibition of political documents concerning local issues, a periodical, the launching of a campaign, the making of a film, the organization of an open seminar, the nomination of a local candidate - there are, indeed, any number of forms of

political outlet for a well-structured group. Even when a group has become intensely involved in a certain line of action, efforts should be sustained to keep alive an *educational dimension*. One or two members of the group who have a more pronounced aptitude for research could be appointed as a *think tank*, whose work of analysis and fact-finding should run parallel to the activities launched. Regular sessions entirely devoted to a critical assessment from a *certain distance* should also alternate with periods of field work. Apart from a general appraisal at these sessions of the work being carried out, the *activists* should judge the validity of the information and techniques acquired during the early theoretical phases and ask for any further information they consider indispensable for their present political activities.

Up to now, the question of defining politics has been avoided. At an earlier point, a search for a valid definition would not have been particularly helpful. The approach has, therefore, been one of gradual approximation, a tentative fixing of the boundaries of this most elusive phenomenon, which nevertheless pervades the whole of social life. One of the examples given above related to petrol, the other to the *right* to watch a specific TV programme. Here we have, in fact, a widely accepted notion of politics as a method of allocating scarce resources, as social management. In any society, decisions have to be taken regarding the distribution of available resources, lest the law of the jungle prevail. How should decisions be taken, and by whom? And it is not only distribution that is at stake. What are the needs of the members of a community? What and how much should be produced to satisfy those needs? How should scarce resources and products be distributed? Social management is one of the concepts of politics most commonly adopted by contemporary writers. It is a modern idea, characteristic of an age primarily concerned with economics, with owning and using things. The older notion of politics as power, however, is still current. He who makes important decisions regarding the allocation of scarce resources holds the power in society. The means of attaining and retaining power is still a more distinctive description of politics than the modern notion of social management.

Both concepts together should provide the basis for adult education, since political issues are always related to either power or management, or both. Understanding the power structure of society and locating the source of decisions that affect everybody's life are essential if one intends to bring about

change. Power relations can equally be assessed and made a subject for frank debate in a group-learning situation. How does one rise to a position of power within a group? To what extent do decisions reflect the wills of the *stronger* elements? How would *power relations* be altered if decisions were made by consensus and not by majority?

It should be quite clear by now that political education is not exclusively a result of organised educational activities. These may well help develop sounder *political thinking* on social matters, but political understanding and social responsibility will arise mainly from collective action at work and in the community. This state of affairs poses the biggest problem for political education: to be genuine and not just the artificial result of a simulated classroom situation, political education has to take place where people live and work. But how is it possible to develop political understanding and responsibility in situations where realities are obscured by confusion, or where work is synonymous with menial tasks unrelated to any consciously assumed social role? How can the meaningless, repetitive, and isolated motions characteristic of modern production, in which both material and social controls remain alien forces to the producers, induce political responsibility? Only in a negative way. It is consequently not surprising that many informal programmes of political education started in resistance to and protest against intrinsically anti-educational life situations (such as an extremely bureaucratic local authority, an authoritarian political regime, a highly hierarchical and de-humanised firm, etc.) By simply organising themselves for social action aiming at the improvement of oppressive social conditions detrimental to learning, adults are already involved in an educational activity. It is of interest that this opinion was shared by the representatives of more than 140 Unesco member states who unanimously adopted a Recommendation for the Development of Adult Education on November 26th, 1976. Paragraph 3 (i) of this document states, in fact, that adult education should *recognize as an integral part of the educational process the forms of collective organization established by adults with a view to solving their day-to-day problems*.

A final remark on adult political education. It is obvious that there is no *right answer* to political questions. There is no *correct* philosophy, no *scientifically sound* ideology. The role of the educator is not, therefore, to push the group towards the unconditional acceptance of one solution, but rather to make all members aware of the alternatives and to help them to choose

the one that appears most adequate in the light of each individual's political personality. It is certainly important to relate ideological choices to the adult's self-interest, so that choices are not made lightly and on the basis of short-lived enthusiasm. However, self-interest should not provide the final frame of reference. Political activity should not be used (and is not used) for the sole purpose of pursuing one's own interest but equally for the *common good*.

Although the adult educator should attempt to exclude any ideas of absolute truth regarding political objectives or regimes, there are nevertheless a number of procedural guidelines that should be adhered to in debates, exercises, and practical activities. These relate to a constant search for mutual toleration, individual and group freedom, and respect for truth and fairness. An ethical dimension should be provided for political education if it is not to lose its educative component and become a mere training course on manipulation techniques. (For further reading on this issue see, for instance, Crick, Bernd & Porter, A. eds. *Political Education and Political Literacy*. London: Longman, 1978).

Needless to say, initiatives such as those described above can only too easily become unrealistic micro-utopias unless what has been called the *learning society* (or, in our case, the *political-learning society*) takes root in social institutions. This would require a deep commitment on the part of local and national politicians, civil servants, managers, trade union officials, mass-media staff, etc., to embark on a far-reaching campaign of fully informing the public about important issues. In other words, open management, open administration and open government - in which reports and speeches no longer cover up the real problems with technical jargon and emotional demagogic but rather reveal the *price* of different measures and practices in terms of advantages and inconveniences for the *common people*. Another Utopia, then? No doubt it is, if expectations are limited to a passive reliance on goodwill. One of the goals of adult political education could, therefore, be described as fostering local pressure groups to demand the free flow of political information from firms, local authorities, central agencies, the government, and from multinational and international organisations.

Given the standpoint of *political relativity* in this paper, it should be clear that the line of thought being pursued here reflects nothing more (and nothing less) than the author's

personal insight into the matter. It is not based on any scientific breakthrough and does not claim to be anything more than the author's personal contribution to the debate on lifelong education. However, if lifelong education is about to become the mainstay of educational systems, and if political education for adults does take the form outlined here, then the question arises: how should school methods and curricula be changed in order to fit into such a new framework? Or can they be changed at all?

Taken by itself, school reform is unlikely. The educational system does not possess the degree of autonomy necessary to make profound and radical changes that run counter to the dominant pattern in the whole society. The same old story again? School will not change unless society changes, and society will only change if and when a changed school has helped develop a different type of human being. This reasoning is not necessarily circular. Societies *do* change, people *are* forced to adjust to large-scale alterations, and they *do* manage somehow to influence the direction of social progress. We are, perforce, already involved in a process of lifelong education, struggling day after day to keep up with the pace of change, to adapt our ways of life, our skills, our *visions of the world*. Can school help? Could our own school have done better to prepare us for the dizzying speed of social change? Apart from all the reservations connected with the role of the school as an institution moulded by the past generation to form the following one, it seems that educational establishments can become more useful and relevant if they introduce a number of qualitative changes.

While the resilience innate in every child or youth that normally enables him to survive a bad school experience without too much harm has to be recognised and welcomed, happy and worthwhile school days are nevertheless a goal worth fighting for. However, the present article is not the place for a question of such scope, on which so much has been said and written, though perhaps not so much has been done. Only a few suggestions will, therefore, be made on how schools could instil in their pupils attitudes "of caring about social problems, becoming increasingly aware of their own personal position, developing a certain proclivity for action that is likely to change social reality for the better", etc. Some may say that this is the recipe for turning happy children into frustrated adults, carefree youth into depressed men and women on whose shoulders all the evils of the world hang heavily. But is ignorance bliss? It would certainly be dishonest to make a schoolchild think that he himself, through his future actions and commitments, could bring

about the millenium. Nevertheless, deep social awareness and concern are worthwhile traits for any young person to develop, a source of strength that could help him avoid the painful crises of despair and aimlessness resulting from egotistical, self-centred philosophies of life.

Having said this, what could schools do to develop a well-informed and balanced political personality in their pupils? A subject like *Understanding Society* could be introduced into the school curriculum in response to the increasing curiosity and interest shown by children in regard to social and political matters. Newspapers, radio, and especially television have added a certain glamour to such political phenomena as elections, riots, revolutions, and wars, initiating discussions in the home among children no older than twelve or thirteen, "Dad, what is a Fascist?" "Mum, is a revolution good?" "How are you going to vote tomorrow?" "What is communism?"

Though the above are the types of question most likely to be put by children, their political education, like that of adults, should avoid taking concepts or ideas as starting points. Political education should begin by describing (or asking children to describe) a certain number of situations familiar to them. Take, for instance, school meals. Let us assume that one day there was insufficient for everybody in the school canteen. "What is to be done?" "First come, first served", someone will inevitably say. What, then, if the traditional bully arrives last? And what, indeed, if the situation drags on for weeks on end? Should priority be given to those who work better in class? Should we, on the contrary, ask for medical advice on the physical condition of every child and, according to the results, feed the weaker ... or the stronger? Or should we feed everybody equal portions, thus risking general undernourishment? What about looking for the reason behind the scarcity of food? Can something be done to increase the food supply, or food production? Should teachers and pupils alike stop classes for a while and work together on creating extra food sources? Alternative decisions are offered as a result of the different opinions that have been voiced. The more opinions the better; the wider the choice, the greater the likelihood of arriving at a good solution. If free speech is allowed though, a great number of mutually exclusive opinions will arise. Which one should be chosen? "Ask the headmaster"; "Ask the headmistress"; "Make all the staff vote"; "Make everybody vote." Once a certain decision has been reached, what are the necessary steps for its implementation?

Politics is not necessarily conflict. Social situations call for either competition or cooperation. In class or during extra-curricular activities, situations can be created which mostly favour one or the other. All participants should later be aware that competition and cooperation are equally natural, depending on whether they have to contend for scarce resources; or to create or produce something together, or to fight a common enemy, the strategy often employed by national governments to strengthen internal unity. This last situation, however, combined with the present destructive weaponry, has forced the whole of mankind to face a new and crucial dilemma: to cooperate finally on issues of universal interest (campaigns against hunger, disease, land erosion; scientific exploitation of unused resources) or to head inevitably towards total annihilation. The whole issue becomes even more complex when one realises that, by giving preference to international cooperation, some governments would have to witness a disintegration of internal unity and, consequently, strong challenges from within. This brief but meaningful digression from situations that can be created at school to one of the most acute issues facing governments and the whole of mankind today underlines the relevance and complexity of subjects such as *Social Studies*. There, perhaps more than anywhere else, the transmission of factual knowledge is less relevant than the fostering of attitudes, the creation of an awareness of all that is at stake in modern societies and of the means which can and should be used to implement the least dangerous or the most widely beneficial course.

Once a few main political issues have been thoroughly discussed, always taking as a starting point a familiar situation, and always trying to relate to personal, local, national and world interests, a game such as *Spot what's political* could become a useful and engrossing activity. Let us then try to guess what groups of young people might then consider as major political issues: "Organise society so as to produce whatever satisfies people's commonest needs", "Distribute whatever is produced in the fairest way", "Make social power accessible to all", "Reduce the risks of an all-out world war", "Make governments cooperate on campaigns of general interest for mankind", for instance. Then take a newspaper and read its political articles in the light of the issues selected. How and to what extent do the facts covered by those articles affect such issues? What course of action does the author seem to favour? This exercise could also be done with any news item of general interest.

Simulation games can also play an important part in the

learning of political facts and in the development of political attitudes. A major event that attracts general attention can be simulated in class by dividing children into all the different groups involved in the issue. In the case of a strike, for instance, groups can be formed to present the standpoint of the unions, the employers, the government, the consumers, the pensioners, the unemployed, etc. Local housing problems, a new taxation system, international respect of human rights, and a host of other issues can provide lively simulation games on the works of a local council, the national parliament, or the United Nations General Assembly.

In addition to providing a deeper insight into social and political problems and into the inevitable chain of repercussion provoked by each group decision, this type of activity will introduce the members of any group to the notions of general objectives and long-term strategies as well as to practical targets and short-term tactics. These ideas are essential to the theory and practice of social management and control. The political education of the young, that is, an education designed to enable children and young people to become full citizens, would be irrelevant if it did not prepare them both to cope with social realities to control - however indirectly - the dominant forces in modern societies.

If schoolchildren are to be prepared to become responsible citizens, progressively mature involvement in *politics* is a pedagogical necessity. Political awareness and responsibility will never be given as a present for reaching legal adulthood. The school structure will have to be adjusted to admit of increased and increasing participation by pupils in the running of its affairs. This can start with surveys on the most popular desserts for school meals, evolve into a consultative committee on the methods and content of education, and finish with collective decision-making on certain issues. *Learning-by-doing* is nowhere more relevant than in all matters relating to social awareness and citizenship.

In conjunction with political participation at school, young people should also be encouraged to get involved in social issues affecting the local community; however enriching and progressive the participation inside school might become, it will not allow for a comprehensive knowledge and experience of the structures and functions of modern society. To understand them and develop social awareness, schools (either the institution

as a whole, or pupils and teachers, individually or in groups) will have to go out and get involved. There again, the process should be gradual. It may start with interviews and surveys regarding local problems and initiatives. Obviously, in small groups or individually, students and teachers can go as far as the degree of freedom in their society will allow, whereas the involvement of the school as an institution will have to be restricted to areas of consensus, and these will not normally extend beyond a few activities concerned with ecology or social welfare.

Finally, *Social Studies* as a school subject can also provide a most effective platform for interdisciplinary work on various topics. A great deal of factual information can be drawn from the other disciplines taught at school and focused on the *political topic* under scrutiny. Conversely the political dimension of other school subjects (Science, History, Geography, even Mathematics) can be revealed, and its consequences underlined, as an attempt to demonstrate the ubiquity of the notion of *politics*.

It is always difficult, and most of the time impossible, to summarise a free-flowing essay like the present one in a short sentence. Nevertheless, I will end this chapter with the answer of an English adolescent, when asked by Edward Blishen about "the school he'd like": "I don't think I could live in the ideal school, because all my life I've been told what to do."

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Chapter 9

The Ethical Domain

H. Kitagawa

Introduction

At a meeting of experts sponsored by Unesco (Sofia, 1978), the following definition was agreed upon:

"The aim of moral education is to integrate into the personality of individuals and into the operational premises of social groups respect for and the defence of certain moral principles, leading individuals and groups to act consistently in accordance with these principles and to cope with reality in an open and critical manner." (Unesco, 1978)

This definition provides us with a clear idea of what the ethical domain is and evidently raises three chief sets of problems:

- (a) Those concerning moral principles;
- (b) Those concerning the integration of an individual personality;
- (c) Those concerning the moralisation of a society.

In view of the present world situation, the following questions arise concerning these areas:

- (a) What kind of changes has modernisation brought about in ethical norms? Even if we should admit the variety and heterogeneity of such norms and their rationales, could not universal moral principles exist?

- (b) In what ways can the alienation peculiar to present-day society be cured? What are the prerequisites of moral maturity?
- (c) In what ways can civic-mindedness or the acceptance of social responsibility be developed without political or ideological indoctrination? How can the tension between personal autonomy and respect for institutionalised authority be eased? Can they be brought into harmony?

These questions will be approached here in terms of: 1) contemporary moral challenges; 2) the human (moral) prerequisites for a mature response to these challenges; and 3) the pedagogical task involved in providing future adults with a firm human (moral) basis for further learning.

1. Contemporary Moral Challenges

1.1 The world today and its moral problems

The world today is troubled by a multitude of problems, most of which have a moral aspect. At the international level there are tensions and conflicts between nations and nationalities; there are problems arising from the differences between races and ethnic groups; there are clashes between ideologies, economic systems, and between industrialised and developing societies. There is the conflict between North and South, as well as between East and West. In every industrialised society there are troubles arising from the increasing mechanisation of production and the consequent alienation of human beings. Much of this is the inevitable outcome of living in societies that are oriented towards technology and consumption, as well as being ruled by cold-hearted and rigid bureaucracies concerned with the organisation of a population consisting of rootless and isolated men and women. There is a widespread impression that mankind is increasingly becoming divided into vacuous pluralistic states, tough, cold, and brutal in their attitudes.

Hanging over all this like an oppressive cloud lies the horrible threat of nuclear and biological war, as well as a growing awareness that the resources of the planet are quickly

being depleted. There is water pollution and land erosion. The deserts are spreading, the fish are disappearing, and the oil reserves are dwindling.

It is indeed no wonder that in such complex and inhuman times people everywhere display growing anxiety and insecurity, coupled with feelings of boredom, irritation and emptiness. Nor is it strange that vandalism, theft, and contempt for law should be widespread.

The above mentioned Unesco report of the Sofia meeting listed the following developments as particularly likely to create acute problems with a moral dimension:

"scientific and technological development that may erode traditional belief systems and confront people with unfamiliar choices;

urbanization that often threatens traditional family structures, fosters alienation, and promotes the formation of youth subcultures with competing values;

rapid population growth that alters the age distribution in a society, perhaps changing the sources of authority;

growing disparity of wealth among the nations that fosters feelings of exploitation, anger, and despair on the part of the poor nations and promotes reckless consumption of resources, or insensitivity on the part of the rich nations." (Unesco, 1978)

These changes and forces are world-wide, though their impact on individual countries varies.

1.2 The moral challenges today

We have tried to list briefly some of the critical problems now facing mankind. They are all somehow interconnected. Untangling them and working towards their solution requires a global perspective and an ethical point of view that seeks what is best for *all* human beings. Each of these problems, of course has technical, scientific, economic, and political dimensions. It goes without saying that each requires a concrete solution.

And the fact cannot be ignored that every solution is fundamentally related to moral choice. In the words of Lauwers:

"All the problems we face, the dangers which grow year by year, are not primarily scientific or technological or even political in nature. They are moral, and arise in societies which are unhealthy because their structure opposes the acceptance of viable moral principles." (Lauwers, 1976)

Such moral tasks lie at the basis of the various critical problems which the present world faces. The only solutions to moral problems are moral solutions.

1.3 The essential features of the moral challenges

What are the essential features of the moral challenges in the present-day world? Are there any moral problems peculiar to today? Are they not common to all periods of history and to all human beings? The answer might be in the affirmative. Nevertheless, the present world presents two unique problems: the breakdown of traditional moral principles and the need for new moral principles with a global perspective.

Let us begin with the breakdown of traditional moral principles. When religion and philosophy were united and provided a common basis and direction, they taught the nature of duty and obligation. In the present-day world, however, it is difficult for us to visualise a single and comprehensive system of values. The on-going processes of modernisation, industrialisation, urbanisation, secularisation and mass education stand in the way.

Concerning education, the ultimate aims of which are far from clear, people's hopes are varied and conflicting. At no time has so much detailed information about human beings been available. At the same time, there has never been so much doubt about the nature and destiny of man. Now that religious and philosophical beliefs have in effect been reduced to "a private and personal matter" and "pluralism of personal private beliefs" (Hirst, 1974) is dominant, people tend to seek the meaning of their own lives instead of an understanding of duty and obligation. Hence self-learning has never been so important as it is today. This implies that today it is necessary for the edu-

cated person to be encouraged to learn to accept full responsibility for his own growth towards autonomy. Self-determination concerning one's relation to oneself and the world is the individual prerequisite for mature adulthood.

In the deep confusion concerning the aims of life and self-development caused by the breakdown of traditional moral principles, the educator should consciously search for personal meaning and encourage his pupils to do likewise; the educator and those being educated should search together for meaning and integrity.

1.4 The demand for a new morality

Another and essential feature of the moral challenges at the present time is the growing demand for a new morality. This is due to the deepening confusion concerning the aims of education caused by the destruction of traditional moral principles. In view of the similar social and moral problems all over the world, the new morality should be universal and transcend differences between races, cultures, religions, ideologies, and stages of economic development.

The demand for such a universal morality has already been expressed, in various ways, in *Foundations of Lifelong Education* (1976). For example, Suchodolski states: "perhaps what is needed is a new kind of belief, a spirit common to all mankind, beyond all regional differences" (in Dave, 1976), and Dave remarks that "lifelong education involves 'transcendence from the confused and troubled state of contemporary man' to a new humanism. Its subject matter is thus the meaning of life itself. In perspective it transcends the geographical and historical present, seeking to find a single, human unity in 'the diversity of culture' on the one hand, and in the relationship of past and present with 'throbs and glimmers of the future', on the other." (Dave, 1976)

What, then, is the universal morality that the present world requires? We are not entitled to deduce it from the existing authorities - religious, philosophical or political - because we are now living in a period when such traditional sources of moral values are themselves of doubtful authority. The new morality must be sought by proceeding step by step, reaffirming daily what is valuable to ourselves and to all mankind, searching for the meaning of life, and facing up to the

confused situations of the present-day world.

However, it may be possible at this stage of the discussion to offer a guideline: the universal morality required today should be based upon rationality, humanism, and altruism. Kirpal (in Dave, 1976) put this very aptly:

"The final aim of lifelong education is transcendence from the confused and troubled state of contemporary man to a new humanism, both human and cosmic, free, wise, compassionate and loving."

The characteristic features of the humanism of tomorrow are here expressed. First, it should be cosmic as well as human in nature. It should be a principle able to re-humanize de-humanized contemporary man and to affirm the dignity of human beings. It should give first place to the pursuit of spiritual wealth rather than to the race for material profit. It should invite the lonely crowd to participate in an intimate community consisting of individuals with their own individuality and personality. It should rectify situations allowing individuals, nations, or countries to dominate others by means of technology, wealth or military forces. It should allow mechanised man to resume his humanity. It should keep an eye on the massive organisations of technology, industry, politics, and information to ensure that they always serve humanistic ends.

The new humanism seeks for a new relationship between men and the universe. "We are the first generation of mankind that is aware, though still only vaguely and dimly, that we live on a small planet limited in size and resources. We are also learning, slowly and unwillingly, that we - the human species - may so mismanage our affairs as to poison our environment." (Lauwers, 1976). The dignity of a human being derives from the fact that he is born into the genus Homo sapiens. In order for Homo sapiens to guard against the error of pride, he must preserve a decent cosmic modesty, being aware of this position in the universe and of his destiny as a human being who takes part in the cosmic process.

The new humanism as such - both human and cosmic - is, in a word, the principle for ensuring the existence, development, security, and happiness of all mankind.

A universal morality should be based upon rational consid-

erations, not on dogmatic assertions. This involves an acceptance both of the idea that a scientific attitude is essential for dealing with ethical problems and that the principles of a universal morality should be based upon the results of scientific investigation.

The scientific attitude demands objective knowledge and rejects any preconceived or subjective idea of man and the world. It faces up to reality and understands that the problems of man and society in the present world are concrete ones set in a certain historical context. An individual with such an attitude is not obsessed with the idea that his beliefs and convictions are infallible; he is open to and tolerant of other world views. Accordingly a practical and pragmatic attitude in the search for solutions to problems as well as an impartial spirit which transcends differences between religions, races, cultures, languages, social classes, and countries - all this constitutes the scientific attitude.

Secondly, the principles of universal morality should be based on the results of objective and positive research; they can be discovered and formulated only by scientific study and investigation.

The belief is widespread that morality cannot be dealt with scientifically, that the establishment of scientific ethics is impossible. For example, motivation is essential to morality; hence it is not a pure motivation to expect some fruit from morality. According to Kantian rigorism for example, the correlation of virtue and happiness can be achieved only in the ideal case. Morality and science are widely considered to go separate ways, for morality is concerned with what ought to be, while science is concerned with what is. If it could be demonstrated on the basis of reason and experience, however, that a person's moral ideas and conduct produce good effects and can enhance both the happiness of the individual and the welfare of society in general, it would generate and sustain the right kind of motivation in all people.

The scientific investigation of morality is however not itself normative. It may be compared to the investigation into the relations between smoking and lung cancer. This investigation itself does not imply the norm that smoking ought to be abandoned; but those who are anxious to avoid lung cancer might stop smoking. Similarly, whether an individual will or will not accept a fact demonstrated by the scientific investigation of

morality depends upon his own free will. A morality based on a science is not imposed from outside, as is an authoritarian morality; it appeals to his understanding and awareness. In this respect, a scientific morality is also different from a religion based on absolute faith.

In order to promote the scientific investigation of morality, we can learn much from contemporary human sciences about value-orientated behaviour. The methodologies of these human sciences range from phenomenology or hermeneutics on the one hand to behaviourism on the other. Humanistic psychology is somewhere between these two extremes. Whichever methodology we accept, some sort of scientific verifications of the effects of moral practice is advisable.

The universal morality required in the present-day world should be based on altruism as well as on rationality. All the major problems and dangers which mankind faces occur on a global scale; in this sense all mankind belongs to one community. In order to ensure the existence, development, security, and happiness of all mankind, the principles of a universal morality are more necessary than traditional principles, which have developed historically within each race or nation and which mainly emphasise the formal aspect of morality, i.e. conventions and rituals.

What is the substance of such a universal and higher morality? What is the source of its authority? Why are so many men and women unwilling to accept the teachings of the moral sages or those of artists and poets?

Jaspers (1962) has singled out Socrates, Buddha, Confucius and Jesus as "paradigmatic individuals". In his opinion the excellence of these moral sages is evident in the light of world history, since they have exerted an influence of incomparable scope and depth which has endured for hundreds of years. Fromm (1967) has pointed out the norms common to Lao-tzu, Buddha, the Prophets, Socrates, Jesus, Spinoza and the philosophers of the Enlightenment. According to Fromm, the elimination of greed and the love for neighbours are among the aims common to every humanistic philosophy or religion. We agree with Jaspers (1962) when he says, "To discover this common root has been possible only since mankind has achieved a unity of communication". A high morality able to ensure the existence, development, security, and happiness of all mankind would doubtlessly be in line with the teachings and practices of Jesus,

Buddha, Socrates, Confucius and other great sages; its essential element would be universal benevolence based on a true respect for all life. Benevolence includes an unbiased universal love for all mankind irrespective of race, nation, or religion. Benevolence is also to be found in that mental attitude which leads us to suffer hardship and sacrifice for the benefit of others. No mental activity or conduct which does not contribute to the order, peace, or security of human society can ever be in accord with the spirit of benevolence. It is displayed in man's respect and love and discharge of his duty as an expression of gratitude towards his benefactors. It consists in a sense of justice without rigidly pursuing abstract principles for their own sake.

This raises an important problem. In the attempt to derive a universal morality from the teachings and practice of the moral sages, it has become hard for many of us to depend upon a comprehensive system of values which is associated with an existing religious or philosophical authority. What concerns us here is not the system of values but the underlying attitudes. We should examine the problem from the human standpoint. Never has it been more urgent for us to examine the meaning of life in the light of the great sages' profound insights and to share these insights with others. This is the way of continuous self-transcendence. Through this process, mankind will come to learn the attainment of both his limits and his possibilities. For most people, such self-knowledge and self-improvement is extremely difficult. It usually takes great courage and a long struggle. It needs the process of lifelong learning. Confucius expressed the way of such continuous self-transcendence thus: "Each day you must be born anew". Only through this process will people be able to acquire a certainty of belief based on their own thoughts and feelings. This is the way of self-realisation.

There is another aspect relevant to universal morality that should be mentioned: human beings are social in nature and could therefore overcome the shortcomings of individualism. As Learning to Be aptly puts it: "The truer he (the particular individual) is to himself, the more closely he follows the laws of his nature and his own calling, the nearer he comes to humanity's common calling and, in addition, the better able he is to communicate with other people". (Faure, 1972)

True self-realisation enhances sociability or communicability. In reality, however, a man usually suffers from the con-

flit between freedom and his social duty. Suchodolski has pointed out (in Dave, 1976) the potential danger of individualism based on the idea of self-realisation: "The concept of a learning society based on the view that every individual should be enabled to organise his life according to his interests limits man to the bounds set by his desire for individual isolation". In his view, a man can only overcome this danger "first, by renewing, extending and deepening his contacts with other people, and secondly, by a profound commitment to social tasks". A meeting of experts on moral education in Asian countries offered this definition: "Moral education, whether based on religion, traditions or human values, is a programme which aims at the development of the individual's character so that he can contribute to the welfare of humanity". (Section for Educational Workshops in Asia, 1976). Only the individual who is able to pursue with integrity both self-realisation or the humanising of the self and thorough-going service to others and indeed all mankind, can increase his dignity through service and commitment.

2. The Morally Educated Person

2.1 Personal growth and development

In the preceding section it has been argued that, because of the breakdown of traditional value systems under the rapid social changes of the present, it has become difficult for us to set up definite goals of education if we base ourselves on a single comprehensive system of values, as was usually the case in the past. It has also been contended that here lies the essential feature of the moral challenges of the present world. Accordingly, it was concluded that it is necessary for every adult today to hold himself responsible for self-learning and self-development and to determine, on his own responsibility, his attitude towards himself and the world. Further, it has been suggested that another essential feature of this moral challenge is the growing demand for a universal morality, a new humanism based on rationality and altruism. The present section will consider in more detail the problem of the human (moral) prerequisites necessary for an adult to attain full maturity.

As Cropley has pointed out, in present-day society with its rapid changes, instability, and uncertainty, "there is a serious danger that identity, self-confidence, and individuality will be overwhelmed or swept away because of the absence of fixed and secure landmarks or props to guide and store up personal develop-

ment." (in Dave, 1976). The risk of serious alienation from the self is indeed very high, and interpersonal relations also tend to be easily disturbed by a collapse of values in present-day society.

A human being is a creature living with himself and with others. Once his personal integrity is disturbed in his relation with himself, his self-image is obscured and he may show symptoms of neurosis or hysteria. At the same time, he will be unable to maintain proper relations with others, and will either protect himself by withdrawal (autism) or become aggressive (violence). In extreme cases there may occur a collapse of personality leading to crime, suicide, or madness.

In the present situation of the world, it could thus be argued that the achievement of self-identification (identity) together with the promotion of easy, sincere communicability with others (empathy) is the prime aim of education; indeed, those who write about lifelong education often discuss personal development throughout life.

2.2 Identity, empathy, realistic attitude and ultimate concern

It is not enough for us to set the goal of personal growth and development in the light of existing values systems; we need to look into the concepts of "mental health" and "moral maturity". Let us begin with the former. Maslow (1970) called it "self-actualizing people"; Allport's (1961) "mature personality", and Fromm's (1956) "productive orientation of personality" refer to the same thing.

At the beginning of this section we have singled out, as fundamental to the human condition, strong identity in our relation with ourselves and empathy with others, suggesting that these two count more and more today as human (moral) prerequisites of an adult. In terms of the aspects of mental health listed by Maslow, identity can be described as "acceptance of self", "spontaneity", "autonomy", "continued freshness of appreciation", "discrimination between means and ends, between good and evil" and "creativity". Allport described it as "extension of the sense of self". As for empathy, Maslow terms it "acceptance of others", "*Gemeinschaftsgefühl*", "interpersonal relations", and "the democratic character structure". According to Allport, it is "warm relating of self to others". Further illustrations of the characteristics of mental health discussed by other writers are not necessary here.

From another angle, we could identify two more intrinsic human conditions: facing up courageously to reality, and always maintaining ultimate concern. The former here means the ability to maintain and cope with living contacts with reality. Only those who acquire this attitude will be capable of self-realisation and empathy. A person can become truly human only by learning to accept the bad with the good.

When a person is thought of in terms of personal totality and integrity, it becomes certain that the attitude of facing up to reality is a necessary condition, but not a sufficient one. It could sometimes be a two-edged sword: It contains a strained self-reliance in confrontation with reality, and it is not free from the danger of self-righteousness or arrogance. In order to overcome this danger, to be aware frankly and broad-mindedly of one's own limits as well as potentialities, and to accept oneself as one is, one needs a horizon of ultimate concern.

Such a horizon provides one with the ability to cope with a destiny and to develop a feeling of universal gratitude. Thus ultimate concern implies a reliance upon a faith and a hope that will sustain one in adversity.

We may well admit that the ultimate concern is premised on a kind of faith, but this faith does not necessarily require a particular form of religion. It is a state of mind with an experiential basis. Human concern with the transcendent need not be supernatural.

So far, four qualities have been identified as human (moral) prerequisites for an adult today: (a) strong identity, (b) empathy, (c) realism, and (d) ultimate concern. All these qualities working in harmony foster the growth of self-integrity.

2.3 Universal benevolence

Concerning the concept of "moral maturity", there seems to be a confrontation between those who argue for rationality and those who maintain that altruism is the fundamental moral component. From our viewpoint, these two should and could complement each other. Kay's (1975) "rational altruism" as "an entirely new moral attitude" may be recalled here. First he refers to Wilson and Peters, who emphasize reason as a prime factor in morality. Wilson (1968) argues that "the appropriate attitude to

morality is a rational one, and Peters (1963) states that "our moral life can be more or less rationally, intelligently and spontaneously conducted". Then Kay refers to Fletcher (1966) who argues that "only one thing is intrinsically good; namely love; nothing else at all".

According to Kay, reason and love are not irreconcilable. For example, as Wilson emphasises, reason in morality includes consideration for the feelings of others, and Fletcher states that love should be reasonable and just. They differ only in the degree of emphasis. Kay tries to find a basis for "an entirely new moral attitude" in harmonising reason and love, which are seemingly opposed to each other. As he puts it, rational altruism as an entirely new moral attitude is "more than reason tinged with love; and more than love circumscribed by reason. It is a new quality in human experience, which may now be amalgamating in mankind and distilling a new quality which will be as essential for moral life as water (a compound of hydrogen and oxygen) for physical survival" (Kay 1975). He concludes that a morally mature person is "a compassionate reasoning creature". This is in line with Fromm (1956) who states that the main attributes of an autonomous person are the ability to love and the ability to reason. Here we may call to mind Peck and Havighurst, (1962) who have defined the morally mature personality as rationally altruistic, and Sorokin (1959), who states that there is a growing requirement for "supreme moral integrity, partaking of both purely scientific and impartial attitudes and compassionate saintliness as attributes of the leaders of tomorrow. Also of interest is Havighurst's (1965) statement that such disciplined or rational love is "advocated by Christian doctrine, as well as by other religions". Kay (1975) calls "the self-actualising man whose conduct is characterised by this emergent moral quality of rational-altruism" *Homo moralis*. It is a vital task for an adult of today to achieve a qualitative transformation from *Homo sapiens* to *Homo moralis*.

This moral quality of rational altruism may be called universal benevolence based on cosmic justice. Cosmic justice is based on the rational recognition of cosmic order. Accordingly it implies an unbiased, unselfish, and all-fostering love. Such universal benevolence based on cosmic justice integrates knowledge and virtue, reason and sentiment.

Thus the four human (moral) qualities mentioned earlier can be considered as components of this universal benevolence. Those who have established their identity and developed their

empathy can accept the personality of others and still keep a resolute attitude of their own. Those who have ultimate concern, being reconciled with the whole world, can establish an effective, flexible, and living relationship with reality. The converse is also true: In a personality characterised by universal benevolence based on cosmic justice, such qualities as identity, empathy, realism, and ultimate concern can be acquired in their fullest sense. Such a spirit of universal benevolence is the source of all human strength. It is the basis of every moral and religious value as well as the source of every significant cognitive and aesthetic function. Thus, the spirit of universal benevolence is not merely a *moral* prerequisite required for an adult today; it is the *human* prerequisite itself which is related to all the intellectual, ethical, emotional, and even physical components of personality. The central problem of moral education is to help human beings acquire this human prerequisite. This task is never entirely achieved in childhood or youth; it requires lifelong education in the family, school, and society.

3. The Tasks of Moral Education at School

3.1 Spiritual independence and moral development

It has been argued that the spirit of universal benevolence, consisting in identity, empathy, realistic attitude, and ultimate concern, is a prerequisite for the formation of a morally mature adult. The problem then is that of helping individuals to move towards spiritual independence.

The infant is usually weaned from four to twelve months of age. The change gives it the experience of shifting away from the mother-child unity. Psychoanalysts have emphasised the influence of this change upon its psychological development. This is its second critical experience, after its birth. The manner of this separation - compulsive or natural, adequate or inadequate is an important factor in personality formation. As it grows, the child gradually becomes psychologically weaned from its parents, through the first period of contrariness in infancy to the revolts of puberty and adolescence. As the success or failure of this psychological weaning plays a vital role in the gradual integration of its personality, we might call it the movement towards spiritual independence.

In this section we will consider this problem, restrict-

ing ourselves to moral development. This is affected and shaped by every institution in which human beings live and act. No doubt the first influence is that of the family. As Knight (1955) puts it, "if a child is brought up in a warm, happy, confident, affectionate home atmosphere, he has the best chance of developing into a well-balanced, sincere, affectionate and generous-minded person. Whereas the child who has not got this background - the child who feels unloved, or who can never feel sure that he is loved - is the potential problem case." No one denies the fundamental significance of the home and family for a child's personal and moral development - especially at the beginning of life, but also throughout the formative years of childhood and adolescence. However, the main concern here is moral education at school.

The next stages to be considered are those of a child's moral development during his school years, especially at the primary and secondary levels, from the age of five or six to fifteen or eighteen. It goes without saying that every school curriculum takes into account what is known about the physical, emotional, and intellectual development of children. What concerns us here, however, is the development of morality.

Kant wrote of heteronomy and autonomy. Dewey postulated three levels of moral development: the pre-moral or pre-conventional, the conventional, and the autonomous. Piaget, who investigated the development of moral judgement, first in relation to children's changing respect for rules and then in relation to their changing conceptions of justice, derived from his questioning of children of different ages the general thesis that there is a progression from early ideas of right and wrong based on adult constraint to an autonomous morality involving notions of equity and reciprocity, i.e. a development from a morality of constraint to a morality of co-operation.

Kohlberg (1963) developed this idea further. His investigations are more refined in conception and wider in the range of cultural backgrounds studied than the original work of Piaget. Investigating the moral development in the light of its cognitive aspect, he demonstrated that moral thinking advances through six stages, the sequence of which he found, by his cross-cultural investigation, to be culturally invariant. The six developmental stages were grouped into three moral levels as follows:

"Level I. Pre-moral level.
Type 1. Punishment and obedience orientation.

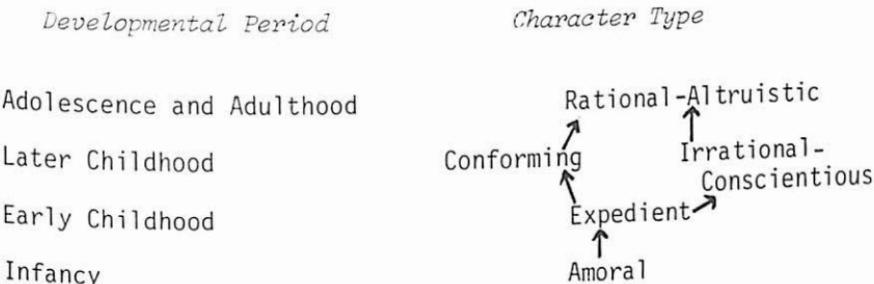
- Type 2. Naive instrumental hedonism.
- Level II. Morality of conventional role-conformity.
- Type 3. Good-boy morality of maintaining good relations, approval of others.
- Type 4. Authority maintaining morality.
- Level III. Morality of self-accepted moral principles.
- Type 5. Morality of contract and of democratically accepted law.
- Type 6. Morality of individual principles of conscience" (Kohlberg, 1963).

According to him, the development of moral thinking progresses stage by stage in an inexorable sequence. The development is promoted when a child notices discrepancies or contradictions in his thinking when difficulties are encountered. An impetus to progress towards the next stage is provided by the thinking of one stage higher than his own.

Based on these findings, he proposes the following guidelines for teachers engaged in moral education: (a) to identify the developmental stage of each child, (b) to elicit a real moral conflict concerning a certain problematic situation, and (c) to present the way of thinking of one stage higher than the child's developmental stage. For moral education to be effective it is no doubt important to identify precisely the stage of a child's moral development and to guide him accordingly.

It should be noted that Kohlberg's theory of moral development seems to overemphasize the cognitive or rational aspects of thought and action; insufficient attention is paid to feelings, emotions, and sentiments. However, in the process of obtaining spiritual independence, the development of moral judgement (Piaget) and moral thinking (Kohlberg) from heteronomy to autonomy can be said to demonstrate its cognitive aspect.

If spiritual independence is considered to be the result of a wholly personal process, Peck and Havighurst's theory of the development of moral character deserves special attention. They postulated five ideal character types and considered their hierarchical relations in terms of developmental sequence. These character types are the motivation patterns of an ascending developmental sequence from infancy to adolescence and adulthood, and five main motives of these developmental stages are treated as components of moral character.



Amoral: Such a person follows whims and impulses, without regard for other people. He considers himself to be the centre of the universe and sees other people or things as means to his immediate satisfaction.

Expedient: Such a person is basically egocentric and considers other person's welfare and responses only in relation to his own ends.

Conforming: A person of this type is guided by the general principle of trying to follow every rule of his group. He wants to do what others do, and is anxious to avoid being disapproved of by others. The consciousness of shame is dominant.

Irrational-Conscientious: This is the person who judges a given type of conduct according to his own inner standard of right and wrong. He will be caught by the consciousness of shame when he fails to live up to his moral ideals. This, he feels, is a breakdown of his own integrity.

Rational-Altruistic: Such a person not only has a stable set of moral principles to judge and direct his conduct but also assesses objectively the results of a type of conduct in a given situation and approves the type of conduct that serves others as well as himself. He is rational in that he assesses objectively the results of every type of conduct in the light of his inner moral prin-

ciples, which he has obtained through his social experience. He is altruistic because he is ultimately concerned about others' welfare as well as his own. He does not pursue a principle for its own sake without considering its effects on human beings. He has a firm conscience, but he applies its directives only in order to achieve the ultimate aim of the rules contained in it. Such a person is at the highest level of moral maturity, being well adjusted emotionally and able to use his constructive capacities to the fullest extent.

Thus Peck and Havighurst argue that there is a developmental hierarchy of moral motivation as well as of moral judgement. According to Kohlberg, understanding what is moral is a different thing from wanting to do it. He believes that the judgement of the stages of morality should proceed only in terms of moral thinking. On the other hand, McPhail (1970) maintains that "reasoning, without feeling disposed to do something about it, is only of academic value", and that, "there is no reason by rejecting natural self-benefit motivation in moral education to make our task more difficult." Peck and Havighurst, when they emphasise the problem of motivation, may be in line with McPhail.

Norman and Sheila Williams (1970) set up both a vertical axis of rationality ("considering-obeying") and a horizontal one of altruism ("self-other") and state that every moral response can be allocated to one of four groups:

- (a) self-considering,
- (b) self-obeying,
- (c) other-obeying,
or
- (d) other-considering.

In this connection it can be said that Kohlberg conceived moral development along the rationality axis and Peck and Havighurst added to it the altruistic one.

This is of considerable import for the whole personal process of attaining spiritual independence. This process can be seen as one moving from unconditional obedience to rational commitment and from egocentricity to care for others, i.e. to altruism.

It has been maintained here that when rationality is developed into a rational recognition of cosmic justice, human

autonomy is then properly located in the cosmic order circumscribing the whole of human life. This enables a person to establish a lively and responsible relationship with reality. When altruism opens one's horizon to universal benevolence, neither selfishness nor an exclusively altruistic conduct will be simply accepted. One can then acquire both self-identity and empathy for others. In short, the simultaneous development of rationality and altruism lays the foundation upon which the spirit of universal benevolence, based on cosmic justice, can be acquired as an integral component of the personality. Moral education at school must therefore encourage this kind of development in children.

3.2 The tasks of moral education at school

What should be done at school to foster spiritual independence in children? What are the tasks of moral education? What kind of skills, attitudes, and conduct do children need to develop in order to move from unconditional obedience to rational involvement and from egocentricity to altruism?

Wilson's (1967) description of fundamental moral components provides an illustration of the translation of highly general aims into specific objectives such as the development of skills, attitudes and behaviour. He gives the following description of these components:

- (a) the ability to identify with other people, i.e. to accept the feelings, desires, and interests of others as having equal validity to one's own.
- (b) awareness and insight into one's own feelings (self-awareness) and those of others (awareness of others).
- (c) mastery of factual knowledge and social skills requisite for proper moral judgments.
- (d) rational formulation of (b) and (c) based upon (a) into a set of right rules and moral principles in connection with other people's interests.

- (e) the formulation of these rules and principles in connection with one's own life and interests.
- (f) the ability to transform the principles of (d) and (e) into conduct, or the ability to live up to one's own moral principles.

While Wilson emphasises the authority of reason in moral education, McPhail (1969), who emphasises inter-personal relations and the importance of care for others, maintains that moral education is basically concerned with helping us to determine the needs and feelings of others and to act accordingly. He defines the aims of moral education as follows:

- (1) Develop our ability to receive messages which others send to us - the words, the actions and the cues, verbal and non-verbal;
- (2) Learn to interpret such messages in terms of what they tell us about the initiator's feelings and interests;
- (3) Become proficient at deciding what we should do, what we should say, in order to help the other; and
- (4) Become skilled at conveying our help in clear, unambiguous messages, which the other will find it easy to interpret correctly."

Further, Kay (1975), who thinks that the formation and transformation of moral attitudes are the main tasks of moral education, sets forth the following four moral attitudes as the main ones to be formed at school:

- (a) Moral autonomy: confidence of the validity of one's moral judgement and the ability to reach conclusions without heteronomous guidance.
- (b) Moral rationality: willingness to talk rationally about moral obligations.

- (c) Moral altruism: care for others, considering others as ends in themselves.
- (d) Moral responsibility: willingness to accept the consequences of one's conduct, the sense of duty imposed upon oneself by one's moral judgement, or moral dynamics.

An important point common to these three sets of ideas concerning the skills, attitudes and conduct to be acquired at school is that all the traits listed are neutral with respect to any particular moral, religious, or political beliefs. There are common elements in the three sets. It is interesting that Kay (1975) compares his idea with Wilson's as follows: Moral autonomy - self-awareness. Moral rationality - (c) (d) (e). Moral altruism - (a) (b). Moral responsibility - (f). Concerning McPhail's idea, we may allocate (1) and (2) to moral altruism, and (3) and (4) to moral rationality. No one would deny that these four traits can be objectives of moral education at school and direct the acquisition skills, attitudes, and conduct by adolescents.

Of great interest is the conclusion reached by Kay: Autonomy which accompanies the workings of rationality and responsibility, is the necessary outcome of love. Thus we could conclude that these four traits form the basis of spiritual independence postulated earlier as the development of rationality and altruism, and at the same time they are its outcomes.

It is important to note that these virtues are indirectly acquired from someone who *has* them; they are not taught by someone who *knows* them. Hence special importance should be attached to the moral character of teachers and the moral climate of the whole school.

It goes without saying that the school creates its own ethos or moral climate with its approvals and disapprovals, rules, ideals and aspirations, groups, inter-personal relations, decision-making procedures, means of communication, and methods of assessment, recognition, and promotion. These qualities of community life in a school strongly affect the moral development of children; the establishment of an intimate community with a definite purpose is the prerequisite for their moral development. Such a community should have the following characteristics:

- (a) The search for a common ethos or clearly expressed values, together with the awareness that the development of moral character is perhaps even more important than the acquisition of knowledge.
- (b) Friendly relationships to bind a community together.
- (c) Tolerance of differences in opinion to engender respect for individual autonomy, which does not harm but enriches the community life.
- (d) Shift from discipline by outside authority to self-discipline, or from constraint to freedom.
- (e) Opportunities for every child to participate in a group where it can feel itself a valuable member.
- (f) Opportunities to experience and understand personal and social obligations.
- (g) Special consideration and care to discover and help children who show signs of stress and inadequacy.

This list of the attributes of a morally educative school is not exhaustive. Generally speaking, however, the acquisition of a high and lofty morality is dependent upon an appropriate climate of the whole school.

In countries with a recognised or state religion, moral education may, in some schools, be a part of religious instruction. Elsewhere it may be included in other courses, the labels of which vary. Whatever name is given to the subject dealing with morality, the important thing is that all sorts of moral problems concerning the school, the children's own life, and outside society should be discussed during regular periods somewhere in the timetable. A considerable amount of time should be devoted to religious and secular value systems, together with their effects on individuals and the community, or to the study of human values as expressed in decisions and in the manner in which commitments - both religious and secular - interact with

those values. Teachers should be trained in conducting discussions in which all pupils are encouraged to have their say, to ponder the implications and consequences of what they say and do, and to look at problems from various aspects.

To be morally educative, all subjects should be taught within their human and personal context in order for them to become part of experience and not be isolated areas of knowledge. Such a personalised and integrated approach to the curriculum would make a great contribution to the moral development of the pupils. The same approach is required for various kinds of extra-curricular activities.

Another element of moral education is a friendly and effective counselling system to help pupils faced with difficulties and stresses. This exemplifies, in school life, the principle of care for others, which provides young people with experience of a moral community. It involves an acceptance of counselling responsibilities on the part of all members of the staff, supplemented by school counsellors, the school psychological service, and welfare officers.

Without the development of self-respect, spiritual independence cannot be assured. A negative self-concept inhibits both open relationships with and responsible concern for others. Furthermore, it provokes those who feel themselves rejected either to band together for mutual support in anti-social gangs or to retreat into protective apathy. Self-rejection, lack of self-confidence, low attainment, and social isolation are the roots of much moral incapacity. The development of confidence in school life is crucial for moral development. If competitive values based on academic and athletic attainment are dominant, it is hard for the less able to avoid deep discouragement. A school system founded on personal contributions and personal progress rather than on a stratification depending upon attainments as well as a diversified curriculum meeting different kinds of ability, is of great value in helping all children to attain a healthy self-esteem. Care is the evidence of an author-formative school community.

It is worthwhile to elaborate on the personal characteristics of an effective teacher of morality.

Firstly, he should be able to distinguish the variety of his pupils, enabling him to discover the potentialities of the

individual, giving each of them an aim suitable to himself, and guiding him towards the fulfilment of his own potentialities.

Secondly, a teacher should be creative and inspire in his pupils a desire to excel. He need not be a moral genius or a sage, but he must know how to communicate with integrity and encourage the growth of self-respect. His character should radiate goodness and strength.

Thirdly, a teacher should be tolerant without being indifferent. Recognition of the variety of moral traditions, as of religious experience, is important in order to escape from the narrowness, rigidity, and intolerance to which every tradition is liable. The integrity and distinctiveness of each tradition must be recognised. However, a teacher should avoid an easy-going relativity of values. The teacher himself may be expected to stand in or for a certain tradition. He may be committed to a certain ultimate concern, because moral education is deeply concerned with the constant choice of moral values.

Fourthly, the concept of openness leads to the idea of a teacher as a seeker after truth. "Openness" implies a constant quest for truth, a perpetual searching and striving which transcends the acceptance of an unquestionable truth.

Lastly, it is an urgent task for a teacher to establish his educational authority in our complicated, mobile, and uncertain society. He is expected to learn how to exert authority without being authoritarian. A teacher who walks together with his pupils along the path of continuous self-transcendence, searching for meaning and aiming at life-fulfilment and self-integrity, may well be able to do so. This also needs the process of lifelong learning.

In order to justify the ethical domain as an area of learning basic to lifelong education, there still remains one crucial problem to be discussed: Can morality ever be taught in the same manner as subjects such as languages, science, technology, politics, art, etc?

Radically speaking, there can be neither a teacher of virtue nor a method of teaching virtue, for virtue is *caught* by a person who is inspired by another person of virtue; it is not taught. The paradox in moral education lies in the fact that virtue can only be learnt from the conduct of a virtuous person who has no intention of teaching it.

In order to tackle the problem of moral education, it is helpful to distinguish two aspects: education for moral reasoning and education for virtue. The former concerns moral reflection and the latter moral conduct. Moral reflection has three components: the understanding of moral principles, analyses of moral situations, and conclusions concerning desirable moral conduct on the basis of examining moral situations in the light of moral principles. Moral education aims primarily at training students to reason morally and could therefore be defined as a process of intellectual training. This is the idea of the justification of moral conduct. In this area, it may be concluded that morality can be taught. A teacher is expected to present his students with moral values or principles, as long as he is open-minded about other beliefs or value systems as well as able to refrain from indoctrination. All sorts of moral problems should be discussed among the students in the light of the moral principles presented. In this way, they will be trained in reasoning about a desirable type of moral conduct. It goes without saying that these processes of moral thinking should be founded on rational understanding and accurate information concerning all the relevant facts.

Education for virtue concerns the implementation of a justified type of moral conduct. In addition to intellectual operations, this training involves the student's emotion and moral will. The scientific demonstration of the good effects of moral reflection and conduct may not only make the students aware of the necessity of putting morality into practice but also motivate them to do so. To achieve this end, a teacher must give his students constant encouragement, help, and advice. And the educator, while conducting the various forms of training, ought himself to strive constantly for integrity and self-fulfilment. However, education for virtue cannot be called "moral" in the truest sense of the word unless it appeals to the inner voice of conscience. A morally educative school, as well as an effective teacher of morality, always takes this into account. Only an individual who can successfully put into practice moral conduct that has been approved in the light of his conscience deserves to be called "virtuous". Education for virtue should, therefore, be connected with education for moral reason. Education of moral reason is a necessary even though not sufficient condition of the whole process of moral education; it provides a basis for education for virtue.

To conclude, morality can be taught at school, at least partly, in the form of intellectual training of moral reflec-

tion. However, the acquisition of virtue falls outside the realm of intentional teaching as such and remains a task of lifelong learning on the part of each individual. But this does not mean that the school is not responsible for education for virtue. On the contrary, the acquisition of a high and lofty morality is dependent, as mentioned earlier, upon the conducive climate of the whole school as well as upon the personal influence of the teachers. In such a morally formative community, each individual has the best chance of developing wisdom and virtue. In this way the moral potentialities of each individual could be more fully developed, making him or her more competent to impart higher moral qualities to the next generation. Hence the idea of education for successive generations being proposed here concerns not only the lifelong moral development of each individual but also the progressive increase of moral responsibility, competence, and reliability of all mankind, generation after generation, in order to cope with unforeseeable moral situations in the world of today and in the world of tomorrow.

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Chapter 10

Technology and Lifelong Education

P. Novaes

Introduction

How should the role of technology in education be defined from the perspective of lifelong learning? What can schools offer?

In this brief examination, we will first look at the relation between technology and education in our society. Then we will try to indicate ways in which education can contribute to the enhancement of life through a better understanding of the implications of different technologies. We will also examine the possibilities within the formal and informal patterns of learning for coping with the effects of technological change.

The aim is not to promote more technical instruction, of which there seems to be more than enough, but to point out to those concerned with lifelong education the importance of considering the neglected subject of alternative technologies.

1. Education and Technology in an Organisational Society

The classic aim of education has been the preparation of the individual for an intelligent participation in the life of the community. This goal presupposes a society in which individuals contribute towards the common good by using their independent judgement. In our present society, however, such participation has become problematic. Deciding on matters of collective import is normally reserved to central bodies, councils of experts, and top managers. In a word, we live in an organisational society.

The organisations which constitute the main institutions in our society are not simply associations of people who get together to promote their own interests. They are hierarchical structures, arranged to combine the work of different specialists into a system set up to attain objectives independent of the individual aims of its members. These organisations are important for two reasons. First, without them, many technologies providing things that have become indispensable would be unapplicable. Second, the state has found in them a practical means to achieve an orderly and prosperous economy.

Organisations and the technologies they use have become a symbol of progress. We have been educated to believe that advancement lies with them and with the development of large-scale systems. Nevertheless, there is a growing suspicion that some organisational technologies are not favourable to human life and civilised society. There is much discontentment with the kind of work they seem to make necessary.

Under attack, the first objective of most organisations has become their own survival, and for that they depend on two educational processes. The first is the indoctrination of their members, educating them so that they will adopt the objectives and the values of the organisation. The second is the promotional task of convincing the public of the advantages of organisation technologies and the goods they provide.

While the survival of some organisations may seem unworthy of such efforts, it would be excessive to propose the suppression of all organisations. The educational task is neither the unconditional approval nor rejection of what society has to offer, but the development of individuals capable of judging what sort of progress is desirable and how it is to be attained.

We have to look into such questions before trying to define the role of technology in the perspective of lifelong education. That is the purpose of the following introductory section.

1.1 Technology and progress

Progress can be defined in many different ways, but, whatever the definition, it always implies some sort of change. It may be only a quantitative change, more of the same, and this

we may rather call growth than progress, or it may be a qualitative change, a change for what we believe is a better way of life.

If education is to stimulate a qualitative change, and not only growth, it cannot limit itself to instruction, the teaching of current knowledge and values. It must help people develop creativity in thought and action. This does not mean that growth, by itself, or instruction, which is a very useful thing, should be despised. Indeed, the experience with instruction for specific purposes has been so successful that it tends to be equated with the whole idea of education; consequently, we are apt to think of education simply as a transmission of knowledge or ready-made values.

A popular form that this attitude towards education takes is training people to be more effective in the performance of some specific task, or to adjust them to desired behaviour. Those are very useful procedures to help people cope with the problems caused by change, but it is much more useful to help people find out which changes can lead to progress and which cannot. For that purpose, however, training is not enough. We need education that will make people inquisitive, critical, and capable of understanding possible choices and their implications.

Choosing technologies is not simply a technical decision. There are moral and political questions to be answered, for people's beliefs and aspirations cannot be ignored. It is vitally important that the chosen technologies be suitable for integration into the social and physical environment; otherwise they may become destructive.

People are usually indifferent to the possible side effects of technology. They just want certain products or services they believe will be useful or enjoyable. If their production entails anything disagreeable it can be placed at a convenient distance. Hence, the pressure of popular opinion can easily lead to a wrong choice of technology. That is why, if we want real progress, education must be concerned more with a critical appreciation of technologies than either with an understanding of their principles of operation or a simple admiration of them as products of human ingenuity. This critical appreciation can be attained only if technology is treated as a part of culture, not as a part of nature. Technology does of course have a material or technical aspect, but a consideration of this side alone is not enough.

There is no question that a fundamental task of education is to keep minds open to the different possibilities of progress, to the alternatives that lead to different ways of life. Education should help lead people in their beliefs and aspirations away from technologies destructive of civilization, or of life itself.

The great problem we have to face is that these destructive technologies seem to be the natural ones for organisations to use, and that for two main reasons. First, they are the only ones capable of producing in sufficient amounts the goods and services people have come to desire and to associate with progress itself. Second, organisations have become the institutional setting the state has found capable of integrating people within its political and economic system.

This was not the original role of organisations in society, but now they seem increasingly to have become instruments of national policy, or social policy, and they tend to assume a greater role in education. In fact, what is commonly called general education is tending to become a preparation for organisational education. It can even degenerate into mere training in certain skills, especially communication skills enabling people to receive, transmit, and execute orders and systems tasks in a proper way.

That, of course, should not be so. If we want to preserve the idea of progress that is at the roots of our civilization, we must aim at developing a capacity for lifelong learning. This learning is not to be confused with accumulating bits of knowledge; it is learning that aims at wisdom, not power.

If this is the appropriate course to be taken, then a whole new attitude towards technology must be developed - not a rejection, but a selection. Technology is an inseparable part of civilization, and the progress of technology is basic to the progress of society. There are many different ways to satisfy our needs. The best way depends on circumstances and cultural values.

The dependence on material or physical circumstances is easy to understand; it is harder to understand the dependence on cultural values. One is tempted to think of technologies as technical things that have nothing to do with values or morals.

Progress requires careful selection of technologies; this is an idea that can be spread by education, if it aims at the perfection of man and not only at his increased usefulness.

2. Organised Work and Education

Most people do not like their jobs. They feel no satisfaction in doing what they have to do, but they accept the situation as inevitable. It is supposed that organisation technology, which gives us some wonderful things, demands some sacrifices in working conditions. Not in the matter of physical exertion or material inconvenience, but in questions relating to the quality of the work situation.

To understand what is meant by that, we might consider that there are technologies best suited for slaves and technologies appropriate for free workers. Most technologies in use by organisations to produce the accustomed goods and services need an intermediate type of labour, which may be called organised work. It is characteristic of this form of work that the worker has no say in what he does, how he does it, or for whom he does it. It is servile work in the sense of serving someone else's purposes.

Education, in the classical sense, is not intended for the person who does that kind of work. To reconcile the idea of education with the servile condition does not seem possible, unless we change some of the basic concepts of our civilization, such as the desirability of freedom and dignity. Perhaps some compromise will be necessary if the products of organisations prove to be indispensable, but that does not seem to be the case.

Organisations and organised work may be very effective for certain purposes, and for relatively short periods, but, in the long run, they leave some essential requirements of human nature unsatisfied. The result is inevitable frustration, with adverse social results, e.g. irresponsible behaviour and destructive attitudes, which are a sort of compensation for the impossibility of individual affirmation.

These effects are supposed to be counteracted by providing people with agreeable leisure activities. These, however, are mostly passive, or without practical significance, so that, in the end, they fail to provide the missing sense of achieve-

ment. The real solution, of course, is to adopt technologies compatible with intelligent and satisfying work.

When work is more than just the routine performance of a task, when it demands more than pure operational skill, then it becomes worthwhile to educate the worker. In fact, work itself becomes a rich learning experience. The best opportunity for an educational relation to develop is an apprenticeship. Being an apprentice includes learning all sorts of things beyond the pure operational aspects of work. Teaching an apprentice involves much more than teaching students in a classroom. It is an educational process, and it can be a very rewarding experience.

Unfortunately, work that is compatible with apprenticeship in the full sense of the word is rather rare. There is the additional difficulty that the idea of apprenticeship is connected with youth. An apprentice is, supposedly, a young person. That is not necessarily true. A learning situation of the apprenticeship type can exist for people of any age, but in this case the traditional institutional set-up would probably not apply.

In an apprenticeship a truly educational relation can develop but it is not the only possible learning opportunity in the work situation. People can improve their education and benefit from it in their work relations even if this education has nothing to do with the operations they perform.

Helping in such education is an opportunity that, among other benefits, stimulates the educator to improve his own qualifications. Everybody always has something to teach and should be able to help other people learn what he already knows. This educational function suffers from a tendency to be reserved to specialists in teaching and in being taught - the teacher and the pupil. This situation can be justified for certain purposes, but it should never be taken to cover the whole educational process.

Too much emphasis is placed nowadays on the techniques of teaching. Learning becomes a ritual to which one has access only through a long period of formal study and training. That is instruction and has little to do with education; it is related to organised, not to free and responsible work.

Work situations and work relations may provide excellent opportunities for education, but it must be free work, in which

people can exercise choice, assume responsibilities, and devise methods of their own. A good situation, however, is not enough; there must also be - and that is the most important condition - a good learner and a good educator for a good education to be possible.

A good education presupposes a moral standard, and that can only be the standard accepted by the community. If we talk about free and responsible work, we mean of course free and responsible according to the values accepted by the community. If it is a matter of organised work, another situation can obtain.

Organisation education is not just operational instruction. It is integrative in the sense that it tries to impress on the members of the organisation certain values, and these values may not coincide with the prevailing mores of the community. Some conflict is bound to result, and the solution will depend on the degree in which the society is an organisation society.

3. Lifelong Education for Better Technologies

Whenever education and technology are brought together for consideration, two ideas are always present. The first is that, our world being full of technologies, it is the duty of education to inform us about them. The other is that increased technical knowledge helps people in their work.

There is a good deal of truth in both these ideas, but they must be clarified if we want to avoid mistakes. Knowledge about technologies is certainly valuable, but it is not just an extension of scientific knowledge. We are dealing with man's inventions, and must consider the consequences of their introduction into the physical and social environment. We are now well aware that the misuse of technology can destroy the delicate balance that makes life on earth possible. It may also, and this is less well known, pose as great a threat to the equilibrium of the social structure.

Of course, not all technologies are destructive. Many of them have become part of our everyday environment, and they are accepted as natural things. We use them automatically, without any concern about their scientific explanation. A few people might usefully learn more about them, but there is no advantage

in making this knowledge general. Education should be much more concerned with the proper use of things than with the intimate details of their operation. That is for specialists or for people who are interested in such things.

The idea that it would be desirable to include more technical instruction in schools is part of one of the great myths widely held today, i.e. the myth that more formal education means better jobs for everybody.

Of course one must recognise that getting a better job is a very understandable aspiration, especially if we consider how bad most of the available ones are. Unfortunately, no education will by itself increase the number of good jobs, but it may lead people to a realisation of what makes better ones possible, and stimulate them to demand technologies that can provide good work situations.

Good technologies are not necessarily complicated technologies. On the contrary, they may be very simple. However, they must be capable of serving man's need for expression through active participation in the life of the community. To bring about such technologies what is needed is not an increase in technological knowledge, but an awareness of the problem and a deliberate search for alternatives.

3.1 Learning how not to destroy the earth

We know that human life depends on maintaining a certain equilibrium between inroads on the environment and its powers of recuperation. There are places which bear witness to the destruction of that equilibrium, and we now realise that, in most instances, a misused technology was responsible.

Sometimes it is possible to alleviate the results of technological mistakes, but one should not place too much faith in the idea that there will always be a newer technology capable of correcting the disasters resulting from the previous ones. It is better to have a clear understanding beforehand of the risks involved. The dangers nowadays are greater than ever, since the technologies we now possess are so much more powerful. In our eagerness to enjoy the benefits they promise, we may be deceiving ourselves. We may think ourselves wealthy when in fact we are getting poorer. We may be destroying things irreplaceable in the future and at the same time be depriving ourselves of a

more satisfying life in the present.

This is an important point in education related to technology. It must be viewed not simply as neutral application of scientific principles, as something that is added to the material world without affecting it, but as something that may bring about serious changes in man's environment. From urban chaos to the creation of deserts, history is full of examples of unexpected consequences arising from technological innovations, and the sensible thing to do in education is not to stress our mastery of the world through technology, but to insist on the careful appraisal of the consequences of disturbing the natural balance.

If it is clearly important to be aware of the destructive possibilities of technology, it is equally important to see its constructive aspects. Lifelong education must not view technology in a passive way only, limiting itself to an accumulation of knowledge related to current applications. It should take technology itself, the actual processes of doing or creating things, as a field for exploration, a domain for the exercise of one's curiosity and imagination. Of course, a distinction must be made between technology for organisation use and technology for individual usage. (It is this second kind that is here referred to as something to be explored in educational activity.)

Perhaps an example taken from the production of ceramics might make this distinction clear. Technology for the industrial ceramist is not the same thing as technology for the traditional ceramist. In the first case it is impersonal, a process that is indifferent to the origin of the substances and energies it uses and that results in a product having no relation to any concrete person. In the second case it is easy to see where things come from, where they go, and what difference it will make to the environment and to the people who use them.

Exploring this second sort of technology can lead to the discovery of the proper way to deal with environmental problems, provided that the exploration is conducted in a rational way and in adequate surroundings. That does not mean such education is ineffective unless we have perfect conditions. It means it is necessary to know what one wants and to proceed systematically in a situation amenable to change. We must realise, however, that the objectives and aspirations of people are neither uniform nor permanent.

The implication is that there is no one best solution. Unless we want to enforce an unnatural uniformity, there will have to be a variety of solutions, and the task of education will be to help people in the search for possible ways to satisfy their aspirations. That is why an education in technology might well be an exploration of a technology.

Learning how not to destroy the earth does not mean repudiating all artificial environments. It means learning to create the environment that will be most favourable to a given idea of civilization.

Apart from certain regions not yet encroached upon by human activities, or preserved from such encroachment, most of the world as it now exists cannot be said to be natural environment and cannot be restored to such state. For civilisation to exist, an artificial environment must be created, but this does not mean a destruction of nature.

Although so much emphasis is placed on the importance of learning how not to destroy the earth, it must be realised that what we want to preserve is not nature for nature's sake, but civilised nature for the sake of man.

3.2 Understanding what one does

If we want an intelligent and participative society, understanding what one does is a necessity. For that understanding to be fully effective, however, it must transcend a simple knowledge of the mechanics of organisation and technology.

Understanding what one does must include an awareness of moral implications, a sense of aesthetic values, and some sort of emotional involvement. Such things are not relevant to every kind of activity and certainly not to every kind of work. There are many work situations where the effort of understanding is simply not worthwhile or, worse still, that are better not understood.

When work is pure exertion, or mere execution, workers should concentrate on doing the job properly and not worry about why they are doing it.

Fortunately, it seems impossible to reduce all work to meaningless tasks, and there remains some work that is more than exertion or execution - work in which the whole person may

be involved and through which education is possible. Such involvement should not be seen merely as an expenditure but also as a possible opportunity for the fulfilment of certain basic human needs and for the enrichment of personal experience.

In this relation to work, lifelong education could, perhaps, be seen as vital education- not as a preparation for something through further schooling but as a process of becoming better educated through guidance and reflexion on the ordinary activities of life.

To a certain extent one is what one does, and understanding what one does is learning what one is. Developing an understanding of what one does is education and should not be confused with instruction and training, which may contribute to education so understood but do not constitute its essence. The aim of instruction and training is to make people useful. There is nothing wrong with that in principle, but usefulness should always be related to other human beings and not be limited to the performance of some organizational task or operation. The idea that the only criterion of usefulness is the ability to satisfy the operational requirements of some economic enterprise or governmental function is the source of many mistakes.

Of course, any intelligent society must have some organisation, but this should not be confused with the idea that people should belong to organisations and not communities. In a society in which organisations replace communities, work is reduced to the execution of specialised tasks; there is little scope for education. In such a situation there would also be little need for education; training would be more appropriate. Emergencies, especially prolonged emergencies, or drastic social changes may bring about such situations, but they should never be considered normal situations; otherwise education will change its meaning.

An understanding of what one does should indeed be an essential part of lifelong education, but it is equally essential that what one does should be worth understanding. Work is a thing of such complexity and variety that it is very difficult to lay down any strict definitions.

Since work tends to be a dominant value in our society, there is a danger of it becoming an object of worship rather than of understanding. Therefore any discussion of the relation

between work and education must begin with an examination of the nature of the work in question.

Perhaps the greatest difficulty lies in the fear that such an objective study of the nature of work may affect the so-called work ethic and occasion some loss of economic productivity. This problem could be alleviated by introducing automation or engaging outside labour. But such solutions are not applicable everywhere, nor are they conducive to an intelligent and participative society.

3.3 Adjusting to technological change

Changing technologies usually bring about new behaviour patterns. If people want to enjoy the benefits of the changing technology, they have to adjust to these new ways.

Although the basic function of education is the preservation and maintenance of a culture, it is frequently called upon to help people adjust to changed circumstances. A very common problem is that of people moving into new surroundings, e.g. in the course of rapid urbanisation. Millions of people can be brought into new environments in which their traditional rules no longer apply. Another problem is the introduction of innovations that bring about changes in social relations. The widespread use of modern communications technology makes this problem much more critical. Such technologies can accelerate the acceptance or rejection of techniques or products for reasons that do not take into consideration long-range or community interests.

The formal education system can make an important contribution towards alleviating such problems. In dealing with adults, one should, however, be cautious in adopting traditional teaching methods designed for children and for entirely different circumstances. Helping adults find their way in a new environment is not to be done by imparting some bits of topical knowledge through the services of teachers trained to deal with children. Such personal adaptation cannot be achieved simply by the acquisition of information or of communication skills. It requires a combined effort of many educational sources and on the part of many different educators.

Any educative effort towards adaptation must assume that the new environment accords with one's idea of what an educated person can adapt to. If it does not, the educative effort will

probably fail and result in a rejection of the new environment. That, of course, is preferable to an adaptation that would result in a degradation of human beings.

In such cases, the right course of action is not to change the type of education or the ideals of the educator, but to adjust the technology to the people, and not the people to it. That, however, is not at all easy. New technologies are introduced because they seem to be favourable to progress. If the notion of progress is tied exclusively to material affluence and power, it may very well give rise to some sacrifice in human conditions.

What can we do to avoid such pitfalls? Can the schools help children who are growing up in a changing world to acquire a capacity to distinguish intelligently between what is good and what is harmful? The acquisition of some technological information may be useful to satisfy some practical requirement, but it does not provide what we are looking for.

Perhaps our goal can be expressed simply as an intelligent education. However, that becomes more and more difficult to attain as social units get larger and more complex. There is a limit beyond which the difficulties of achieving a global understanding become insurmountable. Furthermore, the needs of specialisation make it impractical to be concerned with what happens outside the immediate work surroundings.

As technology and social structure become more complex, this growing ignorance makes participation in social questions more and more difficult. Consequently, education is increasingly concerned with adjustment and with practical training. That is not desirable, and we should try to prevent it. If real progress is to be achieved, lifelong education will have to consist in something more than a continued aggregation of technological knowledge and maintenance of conditioned behaviour. The development of individual potentials for discovery and innovation and the independent search for truth and beauty are certainly more important than mere adjustment. Perhaps lifelong education has been viewed only as something for mass use and not as an expression of what learning should be at all times and for every person.

3.4 Enriching life through skill development

A life that ignores all that the world of creation can offer is certainly poor, and one of the great possibilities of education lies in making us aware of the intellectual and emotional riches of creative activity.

Creative activity can take a great variety of forms, but all of them depend on a quality which can be called, in a very general way, a skill. There are skills in which the mind is mainly involved and skills in which the body plays an active role. There are skills that result in ephemeral things, a sound, a word, a movement, and others whose products remain fixed forever, in stone, or metal, or on a printed page.

Creation is not a product of chance, but something that satisfies a specific desire of the creator- something that was just a thought, that existed before only as a wish, and becomes real. For creation to be possible, there must be a certain compatibility between the skill and the ambition of the would-be creator: Too much ambition, and only frustration results. Too little ambition, and the emotional content of a struggle for creation disappears.

Schools can help in the discovery and development of skills, but care should be taken to avoid turning this help into another mechanical discipline. Skills can acquire educational value if handled in an intelligent manner. Skills can be taught as mechanical action, as a series of operations. That is training, and it can be very useful, but that is not the intelligent way to approach skills if one wants them to be part of education.

The first requirement for the learner is vocation. Learning a skill without having a vocation is like a marriage of convenience. Following a vocation, however, is like falling in love. It can be delicious, or it can be a torment of frustration. A true vocation presupposes being able to satisfy its urge, but it is easy to deceive oneself. No matter how the situation develops, however, an intelligent experience will always be enriching and result in a better appreciation of oneself and the world.

Some friendly guidance in the early stages of skill development can be very useful. It is not expected, however, that the staff of any school will be able to offer guidance in a large number of skills, if in any at all. The natural way is to use the school as a centre for meetings and discussions and enlist the help of people experienced in the skills in which there is some interest.

In many schools, the development of skills has always been recognized as contributing to education. Musical and artistic skills, for instance, have traditionally received the attention of educators. Skills connected with physical prowess are another classical example. Some skills have been cultivated for their economic value; any skills, if they are of a superior quality, may become economically valuable, even if that was not the original intention when they were developed. The converse is also possible, i.e. skills which are intended basically for economic purposes may become a source of enjoyment. Work can provide deep satisfaction, not only by its results, but also by the act of working itself. There is something in it essential to human nature: it provides one with the opportunity to show one's capacity. And like most manifestations of human nature, it must be educated in order to serve a socially worthwhile purpose.

Education in the proper use of a skill means relating it to a cultural context. This implies being aware of social criteria in order to be able to decide when it is wise to adhere to them and when it is better to go beyond. Skills, while reflecting and expressing the individual personality, must be amenable integration into the culture.

Though there is not much scope in our culture for creative skills in the usual modes of production, it is recognised that some inner necessity makes their expression beneficial. The ideal, of course, would be to increase the possibilities of creative work. In the meantime, it is certainly a good thing to educate people in the experience of creative activity, which would otherwise remain undiscovered and unattainable. What prevents most people from profiting from such practices, is their familiarity with the high standards of performance set by mechanical reproduction. This either discourages them by making them feel incapable of achieving similar results or frustrates them by making them attempt things beyond their power.

Creative activity, however, is not restricted to artistic activity. It may take any form in which the personality finds

expression: charity, political leadership, research, meditation. To enjoy any of these things fully one needs to develop a skill, and this is an important part of lifelong education.

3.5 Educating managers

In the preceding sections some possibilities of lifelong education in relation to the proper use of things have been explored. Let us now consider the question of the proper employment of people. This involves a special field of education, i.e. education for management, a subject that has received considerable attention in informal education, more, perhaps, than any comparable one.

One of the reasons for this attention is, it seems, that as soon as a country reaches some economic affluence, people begin to resist accepting undesirable jobs and do not readily dedicate themselves to the service of large and impersonal organisations. There is an evident deterioration of the work ethic.

Managers, more than anybody else, are expected to be able to cope with such problems. They are responsible for getting things done: they must see that people do their jobs. To achieve this, they must themselves be convinced of the advantages of collaboration for the achievement of the aims of the organisation.

Besides being convinced, they must master certain techniques for influencing and controlling people's behaviour. Both are the object of various forms of training, covering a rather large field and including a number of different subjects.

Training, however, is not enough if we wish to have educated managers, and educated managers we must have if we want a civilised society. Educating a manager is not different from educating any other person. It means, primarily, the development of a set of values that will enable the educated person to become integrated into the community, but it also means - and this is very important in the manager's case - developing an ability for rational and independent judgement.

Without rational and independent judgement no progress is possible, and the development of a capacity for it should be the principal aim of lifelong education in the field of management.

However, *rational* and *independent* become meaningless words unless something else is added, for managers manage people,

not things. They are not operators; they are, or should be, responsible leaders. Their activity has a moral dimension, and this cannot be disregarded.

If the manager is seen merely as an agent or tool of the organisation, then this moral sense, which should determine his actions, degenerates into organisation loyalty and is no longer independent or rational. Reducing moral obligation to organisation loyalty is in no sense conducive to progress and should be avoided in lifelong education.

This brings us to a very important consideration. If, as appears to be clear, management education must have a moral basis, then it cannot be reduced to training, which is concerned exclusively with means and not with ends. Any education must include some training, but for any training to be of positive value, it must serve a purpose in agreement with ethical values. Lifelong education should not be understood as covering any sort of activity designed to increase knowledge or change behaviour patterns or improve some skill. Some of those activities may very easily become counterproductive to education or capable of exerting a negative influence.

Organisation management frequently requires this negative kind of training, which, unless we change the meaning of the word, cannot be considered education. Organisation management, however, is not the only kind that has to be considered. Management is certainly implicit in most civic responsibilities, as well as in cooperative or associative activities. In fact, management, like technology, is an integral part of our society and, like technology, it should not be treated as something independent of its human and social context.

Educating non-organisation managers presents no special difficulties. The question of organisation loyalty is not raised, and there are no complicated techniques to be learned. It is, essentially, a question of lifelong learning, not a question of specific technical training.

Since a very large part of our education is related to the world of work, the manager's role as educator is basic. He is one of the important agents of lifelong education, and that should be remembered when discussing his own education.

Chapter 11

The Scientific Spirit

J. M. Gago

1. Introduction: Lifelong Education and Scientific Practice

The present state of the sciences is characterised by the consequences of social separations: growing separation of conception and direction from execution and utilisation; in production, growing separation of execution from creation; specialisation and marginalisation of creative activities, separation of the various types of knowledge and predominance of the sciences as instruments of decision and means of discourse. Thus the validity of knowledge is bound up with norms and scientific institutions. The relationship between science and knowledge has become restrictive, existing only in the form of domination by science; it is inconceivable that any popular idea could, even momentarily, be considered by it.

Historically, this development began as a reaction to the pre-scientific culture of the educated classes. Later this rupture was re-interpreted in terms of popular knowledge versus science. This problem remains in contemporary industrialised societies.

The relation of science to education and, more generally, to popular learning shows still more clearly the division of power and the lack of any really creative interaction between popular cultures and scientific cultures. This lack, which will be discussed later, exists also between institutions within the social divisions; the path that would lead to the type of learning that contributes to popular culture is not pursued by scientists. And educators who could achieve this liaison are generally far removed from the practices and concerns of contemporary science. Thus the problem is twofold: On the one hand, scientists do not

interact with the images that nourish popular culture and science. On the other hand, educators, who could play a decisive role in such interaction and dialogue, have no real access to scientific practice.

The remoteness of scientists is certainly linked with the present characteristics of scientific production, the development of which is not oriented towards opening up ways of participation and collective definition of the techniques and modes of production.

It is difficult to imagine that a more creative interaction between popular culture and the learned culture will take place unless appreciable sectors of the scientific community engage in educative and open social practices. Similarly, educators will not be able to play a mediating role in an intercultural dialogue unless they themselves participate in scientific culture.

Interaction of scientific practices and methods with the society is often viewed in education as a simple relationship between knowledge and ignorance, knowledge and a vacuum. However - and this is another point that will be analysed later - this vacuum, which traditional scientific education hopes to fill, is in fact a rich and coherent cultural fabric of social ideas and practices, a worthy partner in the necessary educational dialogue.

The complete separation between the domains of science and non-science was essential for the development of science vis-à-vis intellectual forms of the past. In the educational domain, however, this clear definition of the frontiers of the scientific spirit has assumed a very different function. It is used as a shield to bar popular culture from contact with science, rejecting any dialogue between the majority of the population and the developing scientific practices.

In the eyes of the public, science therefore appears to be a closed world, efficient but incomprehensible, and sometimes spectacular. The social and professional status of scientists identifies them with this general image; since their functions are not diversified, scientists normally live in the restricted framework of specialised institutions and are rarely concerned with knowledge produced and practised elsewhere. Educational liaison, confine themselves to teaching and zealously devote

themselves to the effective exclusion of popular culture. How could they, then, integrate the elements and attitudes of scientific practice?

The absence of dialogue in traditional science education for the masses often leads to a mere transmission of conclusions or formal aspects without due regard to its methods and concepts of science, which then constitute a separate world of discourse without real impact on ordinary people's ideas. Traditional science education still tends to take the form of lecturing; the absence of dialogue is justified by the distorted image of a radical separation of scientific knowledge from non-knowledge outside science. The know-how of living scientific activity, which is closer to those human activities that call for a *science of the concrete*, loses importance in the face of the discursive and finished image of taught science. There is no real cultural relationship between various practitioners; rather it is an initiation of the heathen into the circle of the blessed.

The scientific spirit seems to have meaning only in relation either to our own practice or to practices that concern us and to which we have access. Therefore, lifelong scientific education must be rooted in popular practices and ideas, broaden them, and suggest other approaches to society and to nature. But the precondition for a really creative approach remains the proximity of knowledge to the concrete know-how acquired in daily affairs.

In the present perspective, the main purpose of lifelong scientific education is not to produce scientists but to enrich popular culture and social ideas about nature and society and to widen people's participation in social life.

The question of fundamental learning in the domain of lifelong science education therefore has to be approached from the point of view of the actual practice in nonformal education. It is not a matter of looking for foundations and basic data in the organised structure of each science in order to use them as the basis for educational programmes; it is rather a matter of defining methodologies for local research on the acquisition and transmission of attitudes and popular ideas in each field of knowledge. From this viewpoint, educational approaches should start with an analysis of the essential aspects of the processes of *spontaneous* lifelong education in the social groups studied. It is therefore primarily a task involving enquiry and ex-

perimentation.

2. Approaches and Experiments

How should this task be accomplished? Answers should be sought first and foremost from the participants in popular education movements and from *animateurs* and teachers. Out of their difficulties, hopes, and despair the concrete social reality emerges and reveals possible ways and practical forms of construction and implementation of knowledge by people with different horizons.

It is always necessary to build up new social relationships with knowledge. These relationships are neither permanent, nor can they be compartmentalised or assigned social roles that give everybody a definite place. The practice of popular education movements, which often sees learning in terms of a break with the dominant structures of subordination, collides head-on with the existing order of social relations and constitutes a source of conflicts and personal questioning in areas quite different from those normally associated with knowledge. Every individual's life, his cultural identity, and the image he has of others are modified by these movements, and he begins to realise that other modes of relating to the know-how and knowledge of others are possible. A new cultural sensibility is created.

But how can the social movement take a stand against the dominant social reality and produce other social forms, however ephemeral, incomplete, and marginal in their outcomes? Do these new social forms and social relations somehow prefigure, in the cracks of the old society, the image of its future? And what sort of reality is suggested by the failure (and there is always failure) of development of these new social forms? Nevertheless, the formation of other social relations in the popular movements does seem to fulfil in essence the social function of engendering and defining hope, and of showing that somehow, despite the repeated experience of immediate failure, a different society is indeed possible, necessary, and desirable.

Hence an analysis of the popular culture movements is of direct relevance in this context. Beyond any normative morality, an analysis of popular education can show the real role and the functioning of educational strategies. This is even more significant in the scientific domain, inasmuch as the criteria of scientific thinking seem to define the culture of present

industrial societies, with their division between popular cultures and "learned" cultures. The relation of education to science has its roots in these problems, some of which will be discussed in the following analysis.

2.1 Lifelong education and action research

Participatory action research employed by some specialists in the humanities, especially by geographers, suggest new relationships between research and transmission of results and new ways of liaison between researchers and non-researchers. It also indicates how this pattern of research may lead to the production of a particular type of knowledge which would be difficult to obtain in any other way. It is a highly interesting approach to creativity and to science education. Since the object of such research is the human reality of the community studied, i.e. the evolution of its space and its activities, it brings to light the images the community has formed of its identity and its history. But these images take form almost under the eyes of the village or the urban district, and the time of the analysis coincides with the time of collective acquisition of knowledge; there is no information gap.

Thus new relations to social development are established. An example is the school where the children, together with parents and researchers, built a small-scale model of what the village will be like in fifty years if the ongoing trends continue. Action-research can thus be not only a source of collective awareness but also stimulus for the will and an impetus for transformation.

First of all it is a dialogue, for popular knowledge is conceived as an object of culture and as one of the starting points for action. Participants in this action are professional researchers, community workers, and members of the public who are interested in discovery and in the acquisition of knowledge that directly concerns them. The educational relationship is not only reciprocal, but also non-discursive. The language of structured science enters only marginally into it, and its function is not to impose silence. When it asks questions, it must also acquire and integrate the language of popular knowledge. The *animateur* researcher is more directly confronted with concrete learning, with which the traditional functioning of research structures may not have made him familiar.

On the other hand, such *open* construction of knowledge requires this knowledge to attain a level of richness and realism which will justify it socially. This is not a matter of utility, but rather of the capacity to demonstrate and to make understood what had not before been seen as a recognisable reality. This is the opposite to the caricature of science often drawn by popular science education, a caricature of the very approach of science and the value it attaches to findings that, outside the logic and the reasoning of scientists, appear to be mere passwords or empty masks.

2.2 The pedagogy of images

The above-mentioned example may also serve to illustrate the importance of studies of social images in science education and to stress the usefulness of a non-compartmental, thematic approach.

The notion of a pedagogy of images has often been advanced; certain research activities have been undertaken, especially in physics, either with school children or with adults in vocational schools. However, these studies, as well as the practical activities associated with them, have not as yet fulfilled expectations. This may be due to the very preliminary character of the studies done in the field of sociology of images. Very little is known about the transmission and social reproduction of images, next to nothing about the interaction of social images with formal learning. Another and more fundamental problem is the usual argumentation for a pedagogy of images in the scientific domain as a way of identifying the pupil's epistemological difficulties and the obstacles to an evaluation of his acquisition of scientific thought.

Clearly, this restricted view deprives the notion of a pedagogy of images of its principal values, viz. those of establishing, in a rigorous and controllable manner, a dialogue between the knowledge of the pupil and that of the teacher; of clarifying the social images the teacher transmits along with his science teaching; and finally, of testing the analysis of reality by appealing to the social images concerning natural phenomena and technology.

A critical examination of the formalistic and restrictive philosophy in science education - with its elitist rejection of dialogue and its epistemological negation of know-how and the science of the concrete - is imperative if the idea is to gain

ground that non-scientists (i.e. almost everybody) can *know* and even interact in their culture with the typical methods and approaches of scientific activity.

2.3 The pedagogy of thematic complexes

In the practice of lifelong education, it will be noted that objects which are difficult to analyse are defined and that its cultural richness derives precisely from this relation to a complex and inter-cultural knowledge. The emphasis traditional education places on the analytical approach to knowledge acquisition (with the resulting difficulty of tackling the complexity of the concrete) is diametrically opposed to the process of knowledge acquisition worked out by the popular education movements, where motivation is primarily engendered by know-how and an understanding of concrete processes. The traditional practice of knowledge accumulation presupposes a final body of knowledge. The school takes charge of the pupils' learning time, since the slow process of analytical accumulation requires that each unit of time, separate from the pupil's viewpoint, becomes a necessity in the global time of the school system. In fact, the only field of application for this learning process would be an education pursued in its entirety up to the highest levels; that is an education received by very few students in the present system.

Taking the complex problems of the concrete as the starting point entails two major consequences. The first derives from the specific and local character of the concrete. The pedagogy of *complexes* - to use an old expression of the 1920s (Pistrak et al.) - based on integrated working themes achieves universality and extensive knowledge through the depth of knowledge about near-by objects and through the diversity of accessible practices. This again is the opposite of the predominant doctrinaire systems, in which the social, technical, and cultural reality of the school and the community appear only in the marginal form of a choice of *examples*. The second consequence of the concrete approach of lifelong education is the important role it assigns to environmental education, i.e. education in which a dialogue can be established on activities and themes which are not merely a school product. Distance education, e.g. through the mass media, must be associated with local forms of activity in order for it to take root in a true movement of learning and appropriation of reality. The mass media, separated from educational appropriations, tend to become a world of clichés and stereotypes. Dialogue with the environment, separated from education and imaginary appropriations, tends to become a world of clichés and stereotypes.

3. Fundamental Issues

3.1 Learned science

Bringing science to the people is the classical model of disseminating enlightenment. Science is the essence of contemporary thought. It represents the only antidote to beliefs, superstitions, and magical practices, and it is the motor of technical progress and social citizenship. In this sense, acquisition of the scientific spirit appears to be the guideline and the central objective of contemporary education.

However forceful these arguments may be, it is nevertheless necessary to consider that the benefits and consequences of the diffusion of the scientific spirit superpose themselves upon a living social milieu which itself produces, acts, and knows. The restrictive reasoning of traditional education, denying all knowledge external to the sciences (the discourse of which education has to transmit), is indefensible in lifelong education concerned with the culture of adult communities, where life is not confined to the places, schedules, and activities of formal education.

This raises the problem of knowledge outside the sciences and its status, i.e. the status which practitioners of lifelong education wish to give it relative to scientific knowledge. At the same time, the very status of science and the role of general acquisition of the scientific spirit find themselves questioned. What does the goal of *scientific learning* in the educational process really consist in? Does it mean acquisition of information or does it mean learning of methods and attitudes? What is it that makes the objective of scientific learning so specific and different from the structuration and transmission of knowledge outside a socially organised education?

In this context it is not surprising to rediscover that all pedagogy is basically a reflexion on the process of knowledge acquisition and that in lifelong education one of the fundamental problems is that of the relationship between popular cultures and learned cultures. Hence the role of scientific culture in popular cultures has to be carefully analysed in view of the great importance attached to science by institutions and the prestige it enjoys in contemporary societies.

In fact it is difficult to make a balanced analysis. Indeed, more is known of the way in which some "primitive" cultures think about nature than of the social images most inhabitants of a large industrial city associate with technology and natural phenomena. These images are part of a popular culture, forgotten and overshadowed by a scientific discourse which, it is imagined, represents common knowledge.

However, this current tendency to ignore popular culture (by viewing it merely as the culture of industrialised societies supposedly based on scientific discourse) renders it impossible to envisage popular culture as a partner in the process of science education. But the image of popular culture implicit in this attitude is a distorted one. The popular cultures of industrialised societies are described by stressing their collective expression, social attitudes, and behaviour without reference to the images which in fact tacitly occupy the place of scientific discourse. Education also has the function of filling this intolerable empty space.

What is the cultural significance of the scientific learning transmitted by the school to the majority of its pupils, i.e. those who complete only compulsory education? How does this scientific learning relate to the science of the concrete in everyday life? Do the school activities that are labelled science contribute to the creation of a scientific spirit specific and distinct from common knowledge? What is the image educators have of the scientific spirit, the primary objective of science teaching? What is their idea of the "science of the concrete", which dominates "all the arts of civilisation, and in particular agriculture"? (Levi-Strauss, 1962)

The science taught in school covers some *results* of the natural sciences, often presented in the form of description; some modes of *operation* characteristic of industrialised societies (in particular systematic observation, practice in measuring, etc.); the *terminology* and *classifications* of some sciences; and the acquisition and practice of some mathematical structures and operations. In other words, it covers the transmission of descriptive knowledge, an introduction to the discourse of science, and an effort to develop competences in systematic observation, registration, and interpretation of phenomena.

Consequently, the *scientific spirit* instilled at school, even in the best type of traditional education, does not differ from that involved in any organised acquisition of knowledge. If science education at school is compared with the education that a young peasant acquires every day at the farm, the major differences that emerge are the dominant role of writing at school, the importance attached to words, and a description of phenomena that are not directly verifiable. To be sure, different kinds of competences are also transmitted; but agricultural knowledge, which is a true *science of the concrete*, is infinitely more controllable, socially controllable, than the knowledge dispensed by the school, which is a repertory of results, observations, and interpretations produced elsewhere. What, then, remains of the scientific spirit, enlightened by the very nature of scientific research, that the school should diffuse for the benefit of all pupils?

Traditional general science education is not an education for scientific research. It merely contributes to the image that the contemporary culture has of the world, and, at best, to the learning of systematic observation and interpretation. This is insufficient for two reasons. Firstly, the cultural barrier, the class contempt for learning of the concrete outside school education. This class attitude frequently generates preposterous situations, such as "bad" pupils falling asleep and completely failing to understand the analysis of periodic movements in physics but who, on leaving school, can dismantle and reassemble the engines of their motorbikes, whose functioning holds no secret. Secondly, the lack in traditional science education of any development of scientific comprehension. The science taught at school is prefabricated. Compared with the science of the concrete, it is impoverishing.

While in many countries important reforms of traditional science education have been introduced, their main contribution has been to enliven the old education, to bring it closer to a real initiation into research. From the perspective of lifelong education, however, the major requirement remains unfulfilled, i.e. the requirement that the school take charge of the domain of the perceptible concrete. This is, in fact, one of the principal reasons for the failure of the school in science teaching. It is no accident that science subjects, especially mathematics, play such a decisive role. The measure of the students' practical relationship to the perceptible concrete and of the overall knowledge they can later apply to their occupations, is determined in the last analysis by their social origin. Thus tradi-

tional science education is an excellent instrument for the selective exclusion of pupils belonging to the lower social strata.

3.2 The science of the concrete

In opposition to current ideas, anthropologists have emphasised the logical, well-ordered nature of the science of the concrete which tends to put too much stress on determinism in a premature attempt to build up an entirely coherent cosmos. They have accented the "true anticipations of the science of the concrete", i.e. "science itself and the methods or results which science will only assimilate in an advanced stage of its development, since man has first tackled the most difficult task: the systematisation of perceptible facts, which science has long neglected and is only beginning to reintegrate in its perspective" (Levi-Strauss, 1962).

These analyses call for a consideration of the importance of the science of the concrete in the day-to-day life of contemporary industrial societies and for a redefinition of the objective of developing a scientific spirit. They also show the ambiguity and confusion which arise when attempts are made to identify the *educational* development of the scientific spirit with the *historical* process of evolution of the modern sciences.

In those societies in which economic development is largely based on scientific and technological progress, the knowledge, analysis and methods of observation of the majority of the population are still much closer to the science of the concrete (i.e. to the modes of interpreting and understanding sensory experience) than they are to the methods of scientific research.

As has already been said, this does not, however, conflict with the fact that "the theoretical models proposed by professional scientists do, to some extent, become the intellectual furnishings of a very large sector of the population. But the layman's ground for accepting the models propounded by the scientists is often no different from the young African villager's ground for accepting the models propounded by one of his elders. In both cases, the propounders are referred to as the accredited agents of tradition. As for the rules which guide scientists themselves in the acceptance or rejection of models, these seldom become part of the intellectual equipment

of members of the wider population. For all the apparent up-to-dateness of the content of this world-view, the modern Western layman is rarely more 'open' or more 'scientific' in his outlook than is the traditional African villager" (Horton, 1971).

Although the above statements have to be differentiated and connected not only with the whole complex of social problems where knowledge seems to be directly linked with real possibilities of change but also with the *social* possibilities of developing a critical awareness in regard to traditions and sources of authority, they contain an important criticism of one of the current images of traditional pedagogical thought. Indeed, what is often perceived as social continuity between "scientific culture" and the real culture of the people is not much more than a mythical continuity established on the basis of social divisions and cleavages by cultural institutions and, primarily, by the school.

In magical modes of thinking, the perceptible characteristics of objects can be associated with hidden properties. A classical example is that of a tooth-shaped seed which is supposed to be effective against snake-bites; this attitude "is, with reservations, better than indifference to any such connection; for classification, even if heteroclite and arbitrary, safeguards the richness and diversity of the universe. By deciding that everything has to be taken into account, it facilitates the memorising process" (Levi-Strauss, 1962).

Although culturally distant, this attitude comes close to that of an urban European who, if asked to interpret the fall of a nail or a sheet of paper, associates greater speed with greater weight and, when confronted with the contradiction inherent in the unequal speed of two identical sheets of paper, one of them having been crumpled into a ball, insists on the coherency of his reasoning because he imagines that the crumpled piece of paper became heavier by having imprisoned air in its folds.

It is indeed a great mistake to associate non-scientific thought with a socially useless chaos characterised by a lack of interest in the observation of phenomena. As a rule, this is not so. Furthermore, it is important to see that traditional science education is imposed more by authority and isolated evidence than by a re-organisation of sensory experience which had previously been differently interpreted.

To repeat, science as it is taught appears very poor and

schematic, based as it is on an aloof discourse which does not adequately respond to the legitimate aspirations of the pupil's very real scientific curiosity, which is nourished by questioning the perceptible concrete. An adequate response to this need would require an elaborate and multidisciplinary preparation of teachers for real competence in analysing the perceptible concrete and in reinterpreting common experience. It would also be necessary to stop excluding the science of the concrete from the school. In the perspective of lifelong education this exclusion is intolerable and corresponds to a social imperative of subordination and a stifling of popular culture. Moreover, it is based on a biased and incorrect view of scientific progress.

Two other points connected with this analysis merit special attention: the question of the real content of the science of the concrete in the urban context of industrialised (and therefore scientific) societies; and the explorative role attributed to the mechanism of the science of the concrete in the development of "learned" science.

The first point, the content of the science of the concrete in urban contexts, is difficult to resolve at the present stage of research. There is no close connection between educational activities and social research in the cultural domain. We are more familiar with the science of the concrete of remote Indian communities in the Amazon region than with that of an office clerk, a building worker, or a dressmaker in a big industrial city.

Superficially, we can evoke the predominantly rural content associated with the interpretation and organisation of the sensorially perceptible world and the uneasiness felt in view of its urban equivalent, where inadequate knowledge of nature and the agricultural world is compensated for by the operational knowledge necessary for urban life. The urban science of the concrete covers the socially determined relationships between individuals and the techniques and operations employed in the town or in day-to-day working life. Compared to the "unity" of agriculture and crafts, this urban science of the concrete seems exceedingly sketchy and contingent. It also has little power, since it concerns relations which develop beyond its control and attempts to understand objects and operations which are products of another language, that of technical and scientific knowledge. Nevertheless the very hope for societies not dominated by social separations and the mechanisms of domination and alienation is seen to lie in the appropriation of a reality that is external

to the science of the concrete. This is the goal of what may be called scientific education understood, not as a school strategy, but as a diffuse social reality which, in varying degrees, exists permanently and pervades all industrialised societies.

The second point concerns the relationship between scientific research and the methods of the science of the concrete. The function of phenomenological models in the development of scientific research may serve as an illustration.

In a famous example taken from the history of science, Bachelard recalls the *metaphor* which associates the magnetic properties of iron with the absorbing power of sponges. He does this in order to demonstrate how such a metaphor, taken literally as an explanation of phenomena, hampered scientific progress in the development of the science of magnetism during the 18th century in Europe.

This example is taken up in the light of contemporary scientific activity not to contest the use of the notion of sponge as a *key* to exploration but to contest its reduction to a mere metaphor. The epistemological obstacle derives from the impossibility of transforming this metaphor into a model.

In pre-scientific thought, the metaphor plays the role of anticipating what will later become a model of interpretation (which, unlike the metaphor, leads to a large number of verifiable consequences); this is due to the fact that its cultural environment is still poor and that it is impossible to construct rigorous theoretical instruments on the basis of this initial illumination which might eventually relate the metaphor to experimental reality. Contrary to current belief, it is not true that in contemporary science creative metaphors serve as mere *a posteriori* illustrations of theory; quite the reverse, images may play a revealing role as catalysts of creation through the almost concrete way they organise and classify phenomena.

What is today called phenomenology in scientific practice is this method of organising phenomena and designing incomplete models, be it in the absence of an overall theory or through failure to apply such a theory. The metaphorical aspects of the model are wiped out by the possibility and the necessity of exploring this model by means of clearly defined mechanisms.

In research circles, the following quip has made the rounds: "a theory is something that can be demonstrated to be

false". This illustrates the conceptual limits in regard to the notion of model, which, being restricted to a certain part of reality, increases the possible number of variations and so reduces its necessity and global rigour. On the other hand, creativity proceeds from models which supply it with key ideas for the exploration of reality. In a manner similar to that of the science of the concrete, these models organise provisional relations and write the "memory" of phenomena. If a conclusion is to be drawn from this, it would be - with all the limitations imposed by different contexts - that, in its creative process, *science integrates* methods and ways typical of the science of the concrete in its organisation of sensory experience.

The idea initially propounded now appears to be justified. There are two approaches to the exploration of reality. They are simultaneous, closely interlinked, and indissociable if scientific education is to be considered in a realistic manner.

3.3 Learning, what for?

The first fundamental question analysed in the foregoing concerned the relations between the science of the concrete and "learned" science, the network of interdependencies of the different kinds of knowledge and modes of knowledge. The objective has been to show the foundations of the educational ideas presented in the first part of this paper in the perspective of lifelong education.

The second and last question relating to the foundations of the educational perspectives studies concerns the relations of popular communities to scientific knowledge and techniques: Learning, what for?

This question may shock. But technological civilisation constitutes a social space within which individuals and basic communities are totally powerless to modify the conditions of their existence. In this space the divisions on which science is historically founded re-emerge in the form of action and knowledge, the outstanding fact being exclusion of the majority of the population from the functions of conception and planning.

This fundamental deprivation indicates the contradiction regarding the scientific spirit which is inherent in a technological society where the majority of citizens have no real means of creating knowledge and controlling developments but at the

same time are constantly confronted with scientific technology and the scientific rationality of objects and operations.

This problem is often seen as a parallel to the classical analysis of cultural domination. Following this model, it may be said that popular cultures, which are essentially dominated cultures, are choked by this domination. In order to survive, they resist the onslaughts of the dominant culture. The popular cultures do have their own truth, but this is swamped and distorted under the domination of foreign forms. The resistance against this domination aims to preserve popular authenticity and, in the last resort, to liberate popular culture from the constraints of domination.

This analytical model, of which only a broad outline has been drawn, originated from the cultural issues involved in the struggles against colonialism, but it often serves as an interpretation of the problems of cultures in industrialised societies. It is not intended here to enter into the debate about this methodology; the issue will be considered from another point of view, namely that of a (real or symbolic) absorption of technical and scientific knowledge by popular culture.

There are two main patterns of existence of popular culture. On the one hand, that which directly expresses the consequences of fundamental deprivation in social life. In this pattern the popular classes seem to be dependent and dominated, a source of fragmentary cultural behaviour that undergoes technical and scientific development as an incoherent destiny. This is a *passive* model of existence, in which popular culture, deprived of any effective knowledge of reality, has to resort to symbolic or imaginary perception.

On the other hand, there is an *active* mode, which nearly always corresponds to social movements of varying importance. It is characterised by real appropriation through knowledge acquisition and action, in most cases orientated towards a transformation of the concrete by way of new and ephemeral forms, the scope and functions of which have already been discussed (section 2). In this pattern, the idea of a static popular culture existing only under domination, the authenticity of which consists in defensive preservation (i.e. the idea of a heritage as the core of popular culture) is replaced by cultural practices that emerge and have their life in the popular education movements.

The direct appropriation of technological reality, one of

the main sources of inspiration of contemporary popular movements, shows the complexity and inventiveness that are applied to the acquisition and development of efficiency and viability in the perspective of the new cultural sensibility of these movements.

By contrast, the field of action from and against which these active cultural forms are generated is the field of imaginary appropriation of objects and operations.

First of all, it is the technological evolution of objects, fed by economic mechanisms and orientated towards "the proliferation of non-structural elements", that engenders an excessive awe of technological progress as well as an inability to conceive of a real understanding of technologies and scientific facts.

Besides objects, there is the "scientific" reality of operations. Reduced to the contingent codification of non-essential elements, these operations resemble ritual processes. "Instructions for use" are the very model of access to the technical object through codes and the transposition of its rationality to the level of operational rules. The television set contributes nothing to the discovery of electromagnetic waves, tuning, amplification, scanning of a valve of cathodic rays, or fluorescence of the screen; it is, instead, a set of operations: unpacking and putting it in an appropriate place, unrolling and connecting the cable after having checked the voltage, pressing the button on the top right and the preselection buttons indicated on the panel.

It is therefore not surprising that, in the midst of a highly technical world whose rationality has been diverted and transformed into rites of utilisation, people feel the magic attraction of the miraculous and believe firmly in the concrete efficacy of the correct execution of secondary operations.

Flying saucers, people from Mars, spaceships from other galaxies - these are all products of the same intrinsic irrationality and lead to the same loss of reality as that occasioned by the mysterious appearance of technical objects and scientific productions. And in a world where, owing to the deviation toward secondary and non-essential aspects, the order and rationality of scientific processes are felt to be incoherent, there seems to be no need for a coherence which would destroy the predictive power of horoscopes (often produced by technical means of incon-

testable prestige), which link a person's fate with his date of birth.

This line of thought may also explain the profusion and success of science fiction: It reveals the anxieties and doubts of industrial societies, transposed onto a scene dominated by science and technology. Like its heroes, the reader of science fiction knows and is in command of the scientific thought of the imaginary epoch of the story. Furthermore, the action in science fiction, conjuring up the extraordinary powers of a supposed technology, sets off in the imagination a kind of inkling of the real deprivation the reader experiences every day, but which, when presented symbolically, shows the inverse face of a magic reality; as if finally everything were clear and simple.

4. Conclusion

In a Portuguese village, the children make and use *technical* toys representing instruments common in the village, e.g. balances, ploughs, mills. They become masters of these instruments, reduced to a scale commensurate with the child's size, through long familiarity with their construction and the way they work. Though not fulfilling the socially productive functions of the real thing, in play they function the same way, and the child learns the technical secrets of these instruments of production. Consequently, it possesses real technical knowledge.

It may be argued that this is a marginal example, linked with obsolete technologies and representing chiefly a kind of paradise lost in the mists of the old society. This is certainly true. But notwithstanding its outdated connotations, this example may reveal the essential aspects of a real appropriation of knowledge and creation which the popular culture movements produce day after day.

But can the creative power of lifelong education help to overcome the social obstacles which prevent people from attaining anything remotely like the abilities they dream of? Creativity could change the world and the life of everyone by overthrowing the servitude inherent in alienated work and in social divisions. And if it failed, what other form of social action could succeed in its place?

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Conclusion

P. Lengrand

This study, consisting of nine contributions, has made it possible to identify a number of factors essential for lifelong education.

Firstly, it has become clear that the capacities of man are unlimited in scope and diversity - at the levels of the body, the spirit, and at that of his relations with the world of things and people. Important as the nine themes are, they do not exhaust the dimensions of the human personality.

A second finding is that it is necessary to utilise this potential and to develop man to the limit of his capacities. Not only does the absence or impoverishment of one of these dimensions cause a privation or a void; it also affects the entire personality and impairs its normal development. The individual who does not find a suitable solution for the need to express himself or to communicate, for example, tends to abandon some of his roles and functions or to seek compensation for his existential unhappiness in brutality or violence. As he has no command over himself, he satisfies his longing for power by dominating those who, in one way or another, depend on him. All along the power scale, the many forms of tyranny or despotism originate in large part from the poverty or impoverishment of the people concerned.

The third finding, which devolves from the other two, is the necessity of learning. Unless each of our faculties is exercised and properly trained, it tends to vegetate and regress. Learning that is applied to the entirety of the individual's dimensions and capacities defines the field of education, both of children and adults, beyond the traditional limits. The need for development being constant, this necessity of learning is not limited in time, but lasts throughout the lifespan. It should be remembered that the principal agent of education is the in-

dividual himself; he is the subject as well as the object of his own development. While external agents acting within formal or nonformal structures are indispensable each of these structures plays only a relative role in the whole process of education.

These are the results of the investigations conducted in the framework of the present study. They are of the nature of fundamental research; the authors have not worked out programmes. This would have been useless, considering the diversity of temperaments, situations and circumstances involved. However, this research is of primary and decisive importance for a strategic conception of education. The weakness of many human projects lies in the absence of clear objectives, or of objectives corresponding to present needs. This applies today to most projects in the field of education. Their authors display great tactical ingenuity in innovating methods and materials, but their efforts remain ineffective owing to a lack of realism and imagination in regard to objectives. For which type of person, for which type of society should we design and implement education? The aim of the present study has been to provide some answers. All the themes dealt with and analysed constitute objectives for educational activities.

It may be added that the notion of lifelong learning illuminates the meaning of life. Instead of seeking it outside the human condition, it can be found in creative work, which builds up a personality out of the abundant biological and social characteristics of each individual.

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LEN

Areas of Learning Basic to Lifelong Education

P. Lengrand

This book is the result of a collective project undertaken by the Unesco Institute for Education (UIE) involving experts from various countries who are known internationally for their outstanding contributions to research into the problems of learning as a basis for lifelong education. The approach adopted takes each discrete area of learning and relates it to the other areas selected for treatment in a global and transdisciplinary view of personal development. The book will be important reading for all those involved in the study and practice of lifelong education.

Contents

Foreword. Introduction. Synthesis of the study. Communication. The education of corporal man. Time and lifelong education. Space learning and lifelong education. The role and importance of art in life: some thoughts on lifelong education conceived as "learning to be". The citizen. The ethical domain. Technology and lifelong education. The scientific spirit. Conclusion. Index.